# The Journal of the American Medical Association

**Published Under the Auspices of the Board of Trustees**

VOL. 90, No. 24 CHICAGO, ILLINOIS JUNE 16, 1928

## INAUGURAL ADDRESS AS PRESIDENT OF THE AMERICAN MEDICAL ASSOCIATION ON JUNE 12, 1928*

W. S. THAYER, M.D.
BALTIMORE

'Tis with unfeigned pride and gratitude that I appear before you today, in a position of honor which I had never expected to occupy. But more than this 'tis a particular pleasure to meet in this city and in this part of the country. A New Englander by birth, a Southerner by adoption and by ties which have made the history and traditions and people of the South very dear to me, the West had always charmed me, but from afar. My real introduction to the West dates from the last meeting of this association in Minneapolis. At that time I had crossed the Mississippi but once. Since then I have reformed. In not one of the last twelve years have I missed a glimpse of Western mountain and plain, and the homesickness that I feel so often during the winter for the broad, free spaces, for the rushing rivers and clear lakes, for the jack pine and the quaking asp and the sage brush, the rosy gleam of the peak at sunrise and the purple glow of the mountain-side at sunset, and that crystal air through which the sun shines, ever warm, and the moon and the stars become one's neighbors—the homesickness that I feel for all this now, and for a people who speak my language, has made me ask more than once: "Where is home after all?" I remember especially that meeting of June, 1913, which, indeed, seems in a past existence—for with me, as with many, I fancy, the war cut life in two—and your cordial and charming greeting. It is good to be with you again.

It has been customary for the President in his inaugural address to touch on some of the many problems which confront this association, which represents what we sometimes speak of as "the organized profession of medicine."

For what are we organized? The objects of the association are admirably set forth in the Constitution: ". . . to promote the science and art of medicine and the betterment of public health"—a brief and comprehensive statement. We are associated to seek further knowledge that we may gain power individually and collectively to prevent and heal disease. Our primary object is not one of self-interest. We are members of a learned profession the objects of which are altruistic, a profession of which we are, or should be, proud. We are members of a profession, not a trade. Not that a trade or a business is unworthy. There are few trades, few branches of business, into which the human element may not enter, in which an artistic or indeed a scientific side may not be found. There is no narrower, no more intemperate attitude than that of him who assumes that the career of the business man or of the banker or of him whose life is of necessity largely given to buying and selling must inevitably lead to a narrow and sordid outlook. Far from it. But the member of a learned profession or the artist in the broadest sense of the word, which may well include the artisan in many instances, is peculiarly fortunate in that his daily activities are such as to lead him away from mere considerations of gain.

The difference between a profession or an art and a trade lies in the essential circumstance that in trade the immediate object is financial success, while in a learned profession the constant daily preoccupation of the student or practitioner, whether he be a lawyer, engineer, chemist or physician, is the acquisition of learning or skill, the promotion of the science or the perfection of the art to which he devotes himself. The common objects of the law and of medicine are to aid and to protect mankind. True physicians and lawyers are always conscious of this. Some, as in every profession, forget it. Prompted by the acts of such men, critics often accuse our profession and our association of self-interest and commercial aims. Alas, it is the acts and the words of the transgressor and the evil doer that are good "copy" in the language of the day, and too often, and quite naturally, 'tis the scheming and conscienceless who gain publicity and who occupy the public eye. But remember, it is the exceptional that constitutes news. If it were not exceptional it would not be news. 'Tis not on the front page of the newspaper or in the works of the popular novelist [1] that one looks for comment on the fundamental virtues of a people or a calling, or for observations on the circumstance that most men, on the whole, are honest and law-abiding. In these days of easy publicity too many of us carelessly generalize and judge the individual or the calling by its black sheep. We physicians are no exception. I am not likely to forget the response given by a large assembly of physicians in London when the Lord Chief Justice, in a graceful address, spoke of the fundamental likeness between the profession of law and that of medicine, each humane and devoted to the alleviation of the ills of mankind. The audience laughed. I was mortified and pained. My father was a lawyer who loved his profession as we should love ours; to whom law was a science as well as an art; who never forgot that its great aim was to promote justice and fair dealing among men. We, who, like

* President's address before the American Medical Association at the Seventy-Ninth Annual Session, Minneapolis, June 12, 1928.

1. Souday, Paul: Académie française: Prix littéraires et prix de vertu, Le Temps, Paris, Nov. 24, 1927, p. 3.

others, complain that we are sometimes misjudged, are we not, after all, very like our neighbors?

He who attempts to estimate the success of a physician or a lawyer by the consideration of "what he makes" is as far from understanding the significance of medicine or law as is he removed from any true conception of art whose main interest in a lovely building or monument or painting is in its cost or its financial value. An individual, speaking of a lawyer, once said to me: "Why, X is a $40,000 man." What did that tell me? Of the lawyer, practically nothing; of the speaker much, for it gave me a very clear picture of his crude, un-understanding and sordid point of view. The physician or the lawyer or the painter or the chemist or indeed the carpenter, the cabinet maker or the locksmith has to earn his living and educate his children and see to it that he is not a burden to others in his old age. This is a necessary care in his existence. But if his main interest be not in his profession or his art—if financial gain be his sole object—he will accomplish little. He will not contribute toward our common ideals and his name will soon be forgotten.

Important and necessary though financial considerations may be to most physicians, happily the main aims and objects of the doctor are the humanitarian and scientific aspects of his work; it is a privilege today to be a physician. There are few greater opportunities in life for immediate service to one's fellow and for that intimate association with men and women which cultivates human charity and sympathy and understanding and tolerance, one of the most beautiful of words, and temperance, one of the most abused. He who can practice medicine for a lifetime without becoming more charitable, more tolerant and more temperate has missed his calling.

We, as physicians, need not complain that the results of such a life, when they are what they should be, are misapprehended or unappreciated by the public even though they be not the subject of daily comment on the front page of the newspaper. It behooves us rather to look to it that we deserve and preserve the enviable reputation that is ours. Do you remember the last scene in "The Enemy of the People," one of the strongest plays of that great student of human nature whose centenary the world celebrates this year, in almost every one of whose characters, good or bad, we may recognize qualities which are our own? A poignant story, that, of what has happened often all over the world—nowhere more often than here in America. The little town, at considerable expense, is establishing a sanatorium in its suburbs. It is to be a famous watering place. The work is almost done when the doctor discovers that the water supply is gravely contaminated. When sure of his ground, he loses no time in communicating his information to the city council, which is shocked and grateful. They investigate and find that the measures necessary to relieve the situation are financially almost prohibitive. In their distress they begin to question the soundness of the doctor's information. He is blamed for acting too hastily. The matter becomes one of public comment and argument by the ignorant and unqualified, whose self-interest subconsciously changes the question from one of truth and reason to one of prejudice and sentiment. There is discussion and recrimination. Accused of sensationalism and disloyalty the doctor is discredited, abandoned by his patients, and ostracized socially; he is "the enemy of the people." At the end two men stand alone, hand in hand, facing an angry and a hostile community: the sea captain who knows the world; the doctor who knows men.

Besides this invaluable human experience medicine offers absorbing opportunity for study and investigation—the chance to explain the unexplained, to add something to our store of knowledge, to give us new arms with which to prevent and combat disease. No matter what his sphere or his position in the profession, the opportunities for study are always before the physician—nay, with improved methods the problems have increased by the bedside, in consulting room, in laboratory.

Fully to exercise that personal influence which he should exercise on his patients and on their families, the physician should acquire and is acquiring, more and more, a basic education sufficient to permit him to move easily among his fellows, an education which should enable him to appreciate that which is fine in life, in art and in literature. To comprehend or superintend or apply many valuable methods of investigation or treatment he must have acquired a knowledge of many of the natural sciences far above that of the practitioner of a generation or two ago. The cultivation of the doctor in relation to the community in which he lives is steadily improving. This has brought it about that the position of the physician in society has risen correspondingly in regions where one or two hundred years ago his social status was, to say the least, modest. More and more, physicians, as the years go by, stand out as notable figures in the community—notable not only for their contributions to the science and art of medicine but for their general human accomplishments and influence—men, to speak only of our own countrymen and of those who are gone—men like Holmes, Mitchell, Osler and him [2] who died but yesterday, who went so far and might have gone so much farther. There are few communities in this country, large or small, in which one may not, on the whole, be proud of the position occupied by the doctor.

This association, the object of which is "to promote the science and art of medicine and the betterment of the public health," has brought together more than 94,000 of the physicians in the United States, of whom 85 per cent or more receive its journal. In cities and rural communities the local society provides opportunity for that mutual understanding and harmony which can be brought about only by acquaintance. Through the libraries which have sprung up in many centers, and through local, state and national scientific meetings, the Association has furthered the spread of medical knowledge and the exchange of experience between its members.

Through our admirable journal and the various special monthly periodicals we are putting forth a mass of medical information of great value for the profession, and through *Hygeia* and the activities of the Bureau of Health and Public Instruction, for the public. By wise organization we have made our central library more accessible to our members. We are laying the basis for a museum by the preservation of the more important material from our annual scientific exhibit, which of recent years has become so important.

The fine bibliographic work of the *Quarterly Cumulative Index* has led to its union with the *Index Medicus*, so that, with the generous aid of the Carnegie Institution, the *Quarterly Cumulative Index Medicus*, the recognized standard medical bibliography of the world, is today edited by our association in cooperation

2. Francis W. Peabody.

V 90
1928

with the corps of the Army Medical Library in Washington. This is a great and highly honorable achievement.

The work of the Council on Pharmacy and Chemistry and its laboratory has been beyond praise and its investigations and reports on the therapeutic worth of new chemical and biologic products, together with its other publications, are of practical and scientific value to the medical profession not only of America but of the world. Our women's auxillaries are valuable agencies in the efforts to preserve the public health.

These are but a few of the activities of this association, which, in every way, has manifested its desire to cooperate and to lend its assistance in the coordination of those ever increasing public and private movements which relate to the promotion "of the science and art of medicine and the betterment of the public health."

Problems related directly or closely to medicine, the physician, his education, his distribution in the community, the prevention of disease, the furtherance of medical research, questions of public health, local, national, international, occupy a position in the public mind today such as they have never occupied before. With some of these this association has been directly and honorably associated.

Let us touch briefly on some of the questions with regard to which there has been or is active discussion and difference of opinion in and out of our profession and our association.

Questions relating to medical education have been discussed among us with peculiar vigor for the past quarter of a century. It is six and twenty years since a committee on medical education was appointed by the President of this association. At its head was Arthur Bevan. Twenty-four years ago the Council on Medical Education was appointed as the result of the recommendation of this committee. Through the faithful and courageous action of the council led by Bevan, wisely supported by Simmons, a great revolution has taken place. Scores of improperly equipped institutions have gone out of existence. The standards of preliminary education for physicians have been materially raised and existing schools have improved their curriculums until today the opportunities for medical education in America, fundamental and postgraduate, are second to none. Few realize the unremitting labor that the work of this council has required and still requires. So accurate and so notable have been its surveys that more and more has been put upon it until, today, it is the repository for information not only as to medical schools but as to hospitals and schools for nurses throughout the country. The medical profession and the public in America should never forget what they owe to Bevan and Simmons and the indefatigable secretary of this committee, Dr. Colwell. The rapidity with which this revolution in medical education has taken place, the efforts to raise the level of the character and attainments of the doctor, have been accompanied by active discussion and by interesting and valuable experiment.

In the course of this discussion, even the work of the Council on Medical Education and Hospitals, or at least some of its results, have been criticized and sometimes rather sharply attacked. Despite the great improvements in medical education which have followed the work of the Council there has been undoubtedly a tendency to overstandardize the curriculums of the medical schools of the country. Some states have erred in excessive and unduly specific demands on those applying for a license to practice. There have been those who feared, and who fear, that through exaggerated attempts at standardization there is danger of killing that independence and initiative in serious institutions of learning without which normal progress is impossible. Rightly or wrongly, others have insisted and continue to insist that the requirements for admission to schools of medicine have been so rigidly regulated that valuable men are being lost to the medical profession. No doubt some good men have been lost, but from how many ill fitted has the public been spared?

Yet others regret the loss of teaching opportunities for some excellent instructors formerly associated with proprietary schools which have disappeared, an objection which is answered to a certain extent by the opportunities offered for postgraduate instruction to interns and, I think, to a greater extent, by the realization that the best postgraduate opportunities are always to be found in assisting eminent practitioners or students.

Recently we have met with rather severe criticism in the delightful, although somewhat acrid, address of Sir Andrew Macphail,[3] who bitterly complains that the raising of our standards of admission to schools of medicine is flooding some of the institutions of a sister country with undesirable men. To which one can only reply that we are truly very sorry. We should be only too happy to deliver him from the plague of locusts from which we have been delivered ourselves. We did not mean to turn the cloud in his direction. But would he ask us to take them back?

The admirable report of Abraham Flexner on the medical schools of America was followed by manifestations of special and munificent interest in problems of medical education on the part primarily of foundations which had already contributed open-handedly toward medical research and toward the elucidation of questions relating to the public health, notably those organizations which we owe to the generosity and vision of the Rockefellers. As a result of all this not only have the schools of medicine in this country become more and more children of its universities but academic methods and standards have been brought into medical teaching to a degree that would have seemed incredible but a few years ago. Interesting experiments have been carried out in the management of clinical departments resulting in better direction and organization by a responsible head so well provided for financially that he is more able to give the greater part of his time to university work and to choosing his clinical and laboratory assistants on the basis of merit alone. Moreover, in the better schools, adequate laboratories with suitable endowment have been provided for the clinical services, and through more generous salaries the opportunity has been given as never before to young men of promise to spend five, ten or fifteen years after their graduation in an active medical unit acquiring clinical experience while devoting themselves at the same time to the study of special problems. These laboratories have been an immense blessing to the university, to the hospital and to its whole staff, affording to the clinician opportunities for investigation which had never been his before—opportunities which in many instances have been seized on with avidity. But with all these advances and advantages there have been associated circumstances which have provoked active criticism—criticism which has been directed largely at certain details of organization of some of the earlier of these university clinics.

3. Macphail, Andrew: American Methods in Medical Education, Brit. M. J. 2: 373-380 (Sept. 3) 1927.

Somehow or other this effort to place clinical divisions on a fuller university basis has come to be referred to as the "full-time plan," a deplorable misnomer against which I have never ceased to protest. This very expression has helped to fasten on the public certain false ideas which have become strangly prevalent and have given rise to heated discussion.

I will merely refer to three of the most important of these misconceptions; namely, that in some schools an understanding exists that the professor may not engage in private consultations. I know of no such school.

Secondly, that the understanding existing in some clinics that the receipts of the professor from his private consultations shall be turned into the budget of his department is a *vital principle* rather than an experimental *detail* of the plan of organization of the clinic. This matter I [4] have referred to often, first, publicly, in my address as President of the Congress of American Physicians and Surgeons in 1916.

The third and most important is the false conception that the ultimate ideal of the university school of medicine is to place clinical teaching wholly in the hands of university professors and gradually to exclude the practitioner from hospital and school. I need not say that such ideas could hardly enter into the mind of one experienced in medical teaching. Nor did they, I think, enter into the heads of those who first discussed the experiment. The sole object of these efforts has been to free, not to restrict, the professor; to make it possible through adequate salary for him to devote the time that he will to his clinic and his university work, and to afford the department an endowment suitable for the maintenance of the subsidiary divisions with their laboratories, and for the salaries of those who may preside over these laboratories, while doing their share of the teaching and acquiring that invaluable experience best afforded by a service in a large and active clinic.

There has been nothing new in the ideals or revolutionary in the methods employed, which have followed the natural evolution of the trend of the last fifty years. The misunderstandings have arisen, I think, largely because in some schools the attempt has been made to establish a university clinic in the absence of the first fundamental necessity; namely, a hospital of size sufficient to provide adequate material or to allow the professor properly to utilize his clinical staff. This has been, in my opinion, an unfortunate mistake which has worked hardship on university and clinical instructors as well as on the students. It has been especially unfortunate in that it has confirmed in the minds of critics a false conception of our ideals.

Whatever criticism may be justified of some details of conception and of administration, the effort to place the clinical departments of our schools of medicine on a fuller university basis have been productive of great good. For a discussion of some of the phases of this question let me refer you to the admirable words of Francis Peabody,[5] in a recent issue of THE JOURNAL.

Other problems widely discussed today, and closely related to medical education, are those concerning the training of nurses.

There is a strong feeling in many of the better schools of medicine that we have been trying to crowd too much into a four years' course. And here let me say that I wish I might live to see the day when such elementary methods as a prescribed four years' course had disappeared from American medical education; when our schools were so organized that a student of medicine might be treated as a man rather than as a schoolboy. More and more we are realizing that our schools should give a thorough training in the essential foundations on which medicine must be practiced, instruction which must include a considerable amount of practical experience in ward, outpatient department, laboratory and operating room, while offering opportunities later for special studies for advanced men. The foundations must be good. A man must learn the basic principles; he must have practical training in the science and art of diagnosis and therapy and the principles of surgery, and must gain a familiarity in the use of the common instruments of precision which he must employ by bedside, in consulting room and in laboratory. The medical school is not the place for the training of specialists, nor can one emerge from a school of medicine a skilled surgeon. The specialist who has not had a good basic medical training is a danger to society. Too early specialization is one of the great faults of modern American education.

Now it is a curious phenomenon that, as physicians are seeking more and more to abandon the classroom for the ward and the laboratory, those engaged in the training of nurses are tending to give more hours to the classroom and to complain that too much time is given to practical work in the wards, and this in connection with a training in which the practical side is of especial importance. One hesitates too hastily to criticize, but I wonder whether our friends interested in nursing education may not be headed in the wrong direction? I wonder whether, in the worthy effort to make a nurse's education as complete as possible, they are not attempting to crowd into the years which should be given to their fundamental training subjects which are analogous to the medical specialties as well as other desirable but not necessary knowledge? I wonder, for instance, whether it is wise or prudent to attempt to give the nurse, in her fundamental course, a training in public health nursing and social service. And, again, is not the elaborate teaching of the history of nursing which is insisted on in some schools a luxury rather than a necessity? Are they not making perhaps the same error that we are now trying to correct in the teaching of medicine? Are they not committing that fault which is commonest in all our American education, medical and nonmedical; namely, the attempt to give a smattering of many things at the expense of the foundations?

More or less contemporaneously with the increased interest in medical research and medical education, in the improvement of schools of medicine, in the establishment within and without universities and hospitals, of institutions offering special opportunities for investigation, there has developed a widespread and growing interest in the public health and in the prevention of disease. Among the first of the results of this interest were the efforts directed against tuberculosis, which have accomplished so much. Great philanthropic organizations working wisely through local, state, national and international agencies, from some of which, alas, short sighted political action has held us apart as a nation, are bringing the city, the state, the nation and the world together as never before in concerted and cooperative movements directed toward the study of the physical ills of mankind and their prevention. I

4. Thayer, W. S.: The Medical Aspects of Reconstruction, Am. J. M. Sc. **158**: 765 (Dec.) 1919.
5. Peabody, F. W.: The Soul of the Clinic, J. A. M. A. **90**: 1193 (April 14) 1928.

V 90
1928

doubt whether there has ever been a period when the interest of the public has been so directly centered on so many subjects and problems with which we as physicians are closely concerned. In these problems, so far as they tend "to promote the science and art of medicine and the betterment of the public health," we, as an organization, are necessarily interested.

With the advances of the last fifteen years in our knowledge of infectious disease, which have revealed invaluable prophylactic and therapeutic possibilities, the duty of government to occupy itself with the public health has been generally recognized. In the larger centers of population, boards of health occupy a position of importance and responsibility undreamed of in the past. The necessity of registration of disease, of inspection, of disinfection, of prophylactic vaccination, has resulted in the delegation to such boards of powers which, only a few years ago, one would have fancied scarcely possible in a republic. The love of personal liberty, instinctive in the English-speaking, rebels always against that which sometimes seems meddlesome control. It would be infinitely more agreeable if we could live in the wilderness where there were no considerations of government or "politics"—but "politics," which mean government, are, alas, necessary in a populated country. They are the ransom which we pay for a greater good.[6] Every larger center of population has now its city laboratory in which necessary diagnostic assistance is given to practitioners in the care of their needy patients. Through visiting physicians and nurses the city is overlooking its school children from a prophylactic standpoint, and the medical profession and the public are seeking more efficiently to provide for the care and the sanitary education of the poor. Social service departments in hospitals often cooperate with city departments of health and sometimes with those schools of hygiene which have been organized within later years for the better training of administrators and students of subjects relating to sanitation.

In many regions, lay public health organizations are arising which seek on the one hand to cooperate with city and state departments of health or, on the other, to guard them, improve them and remove them from unhealthy political influence.

The philanthropic public, conscious of what has been and may be accomplished by wisely carried out sanitary measures in the large centers of population, has begun to turn its attention to rural communities. Several organizations interested in the improvement of the public health are seeking through cooperation with county boards of health and with the local medical profession to establish medical centers analogous to those existing in larger communities, with laboratories, district nurses and sanitary demonstrations which may furnish to profession and public alike the advantages which the city enjoys, in the hope that community, county or state may see fit later to contribute suitable funds to their support.

Other lay organizations have conducted an active propaganda setting forth the advantages of periodic physical examinations. Many large newspapers, indeed, have their "health column," in which advice, wise or unwise, is daily proferred to a public increasingly inquisitive as to such matters.

Great changes have come over life and society within the memory of many of us who are now living. Mechanical devices of all sorts resulting in mass production to an ever increasing degree, great industrial development leading to associations of employers and employed and all mnaner of cooperative procedures have led to conditions in which considerations of the individual have been more and more sunk in consideration of the masses. The day of the skilled artisan seems almost to be disappearing.

At the same time great changes have come into medical practice through the advances in our knowledge and the spread of specialization. That which constituted a reasonably thorough physical examination when I was a student was a simple affair. Today it may be a long and time-taking procedure in the course of which one is obliged to seek information through a variety of methods of study available only by reference to colleagues with well equipped laboratories or trained in special methods. The amount of time that a physician must give to the study of his patient in order to satisfy himself is surprisingly greater than it was a few years ago. The expense demanded to secure adequate medical attention has greatly increased for the public. The expense of giving adequate and conscientious attention has likewise increased for the physician. The question as to how adequate medical attention may be given to the public at figures which it can reasonably afford, the question as to how the physician in these days may support himself at the same time that he satisfies himself morally by practice in regions in which the necessary laboratory and special assistance is not at hand, are questions discussed everywhere by the physician and by the public. The tendency toward that which is sometimes spoken of as group practice is unquestionably growing, sometimes wisely, too often unwisely. The introduction of so-called pay clinics in hospitals where groups of physicians cooperate that they may afford to those in moderate circumstances adequate attention at minimal cost is becoming more common. Great industrial combinations are beginning to appreciate the advantages of systematic provision on a large scale for the preservation of the health of their employees. In some cities they are seeking to cooperate not only with the local sanitary boards but often with the schools of hygiene in the establishment of better sanitary conditions in factories and stores, and to one school with which I am familiar, more than one large corporation has given generous support. Such concerns, all over the country, are employing physicians in increasing numbers for the care of their employees, and trained sanitarians for the general supervision of the public health of their organizations.

There can, it seems to me, be no doubt that the close personal association between physician and patient, the human influence, is in many ways the most vital and important element in the practice of medicine. Every serious physician recognizes this. Every serious physician realizes that, excepting in the rarer emergencies, his greater work lies in the exercise of this human influence—in his ability to lift, to encourage and to put sound ideas into the mind of his doubting and fearing patient; to teach him how to live, to discover and to teach him how to avoid those daily influences that are breaking him down. And yet the tendency in medicine has been so definitely toward specialization that the opportunity for the exercise of this sort of influence seems to be diminishing. But in like manner the tendency in industry and in government and in human life in a general way has been toward combination, cooperation and collective work in which the individual is more and more lost sight of. In Germany and in

6. Souday, Paul: Le Temps, Feb. 9, 1928.

England and, but yesterday, in France, statutes providing for old age and a certain measure of health insurance have been adopted by government. All over the world such measures are being discussed. Health insurance is already practiced by some large industrial organizations in this country.

These are but a few of the problems which meet us as individual physicians and members of the American Medical Association. How are they to be solved? What effect are these changes which are occurring in life going to have on medical practice and on medical ideals? What are our duties as individuals and as members of this association? These are questions that no one of us can answer at the minute. I shall not attempt to answer them. Time alone will settle them. On the other hand, I wish sincerely to say a word or two as to the general attitude which seems to me becoming to us as individuals and members of a learned and humane profession. Certain fundamental truths we should remember.

Our main functions as physicians are to care individually for our patients, to treat them when ill and to give them such advice that they may preserve their good health. These are our first and most obvious duties. But equally important is our duty to prevent the spread of disease from our patients to others within the household or outside; such duties, for instance, as may be ours in the care of the excreta, the utensils and the fomites in a case of typhoid fever; this is an equally obvious duty to the family and to the public at large. Again, it is our duty to cooperate in every respect with local boards of health in the early reporting of registrable disease and through thorough and scrupulous attention to all prophylactic measures. These, then, are our immediate duties. With Candide let us cultivate our garden.

But there are other duties which are ours with regard to the public health which we share with the public, for it is not within our power to organize and direct and administer on our own responsibility those governmental measures which relate to public health with regard to which it is the right and the duty of the general public to concern itself. In the care of the public health the physician, individually and collectively, has heavy responsibilities. Just as in matters of legislation it is the lawyer who is the specially qualified adviser, on whom special responsibilities in connection with the framing of laws should fall, so in matters of public health it is the physician on whom the burden of special competence, and therefore special responsibility, lies. This special responsibility we should never forget. In the first place, we should use every means in our power to maintain the character of our public health officials. We should use our influence in every way to bring it about that only trained and experienced sanitarians are placed at the heads of municipal, county or state departments of health.

Every physician who has had a decent education knows that the preparation for such a position demands special training and equipment and experience. It is the duty of the local medical profession and of the local branches of this association to see to it that only qualified men occupy these positions of heavy responsibility. This is a subject of which I [7] have spoken in public more than once in the last twenty-five years and on which I have long insisted in my annual talks on medical ethics to my students.

Conditions have changed for the better but we are still treated too often to the humiliating spectacle of a mayor who appoints his family physician or some friend who has tired of practice to the position of commissioner of health; and to the more humiliating spectacle of the acceptance of this responsibility by the thoughtless appointee, who too often is a member of this association. It is our duty to impress on the public that sanitation is a very definite specialty of medicine, one burdened with peculiarly heavy responsibilities, which no physician without a special training is qualified to undertake as an expert. The commissioner of public health should be chosen with care as great as that exercised in the selection of a university professor. We physicians and this association in all its branches should seek, in public and in private, to bring it about that such care is exercised.

Our relations with the public may be, and often are, delicate and sometimes trying. They are not dissimilar to our relations with the friends and the family of our patients, relations which call constantly on the tact, the good judgment, the charity, the tolerance and the temperance of the physician. But on our tactful guidance of and cooperation with the friends and family of the patient depends often the life and the happiness of many individuals. The patient and his family are free agents and have a perfect right to change their physician at any moment.

In the broader matters of public health the public has the same right, after seeking what advice it will, to take just what action it chooses. It is our privilege to be in a position where individually and collectively we are especially qualified to advise the public in these matters. This privilege implies a heavy responsibility. We must seek to direct the public toward sane and efficient action. But we must remember that neither as individuals nor as an association have we the right to demand that the public accept our views.

As an association we are placed in a peculiarly delicate position. Do what we will we shall be accused by those who disagree with us of selfishness, of attempting to protect our own personal interests, of using our power as an organization to oppress others. We must be exceedingly careful to see that such reproaches are wholly unjustified. We must not expect that we can go our way without adapting ourselves to circumstances beyond our immediate control. A well balanced life is one long compromise. We must compromise as best we can with existing conditions while we seek to direct events toward that which we think the wisest course. We cannot stop the general tendencies of the day by violence or heated opposition. The late King Canute was not successful in controlling the rising tide. The rarest and most valuable of human qualities is the ability to square one's ideals with the realities of existence. We must as a profession and as an association make this effort. We must deal with conditions and not with words. Happily we can point to the objects of our association—"to promote the science and art of medicine and the betterment of public health"—and to a past of dignity and temperance in an intemperate world. If we are right we shall make ourselves heard.

Ladies and gentlemen: In this life there are always those, often superior men and women, who are so occupied in their special interests and pursuits that they lose touch with the larger activities of life, scientific and political. Such good people are very likely, subconsciously, to manifest a certain impatience with public movements or discussions. From the privacy of their

7. Thayer, W. S.: On Some Public Duties of the Physician, Maryland M. J. **48**: 431, 1905; On Some Relations of the Physician to the Public: Duties and Opportunities, J. A. M. A. **50**: 1877 (June 6) 1908.

V 90 1928

peaceful alcove they are prone to regard with suspicion and distrust those who enter into public life. There are such men in our own profession who, rarely departing from the quiet round of their existence, look on those who direct the functions of this body with something of the suspicion that newspapers foster in the public toward our legislative representatives. I wish that some of these men might have the opportunity that has been given to me to see the working of the central organization of this association, its councils and its boards. They could only feel, as do I, a sense of the deepest admiration for the character and devotion and idealism of those men who represent us. And they could not fail to marvel at the magnitude and the beneficence of the work they have accomplished and are accomplishing.

1208 Eutaw Place.

## INTRAMUSCULAR USE OF CONVALESCENT SERUM IN TREATMENT OF POLIOMYELITIS *

E. B. SHAW, M.D.
AND
H. E. THELANDER, M.D.
SAN FRANCISCO

In a previous communication,[1] the use of convalescent serum intramuscularly in the treatment of a small series of cases of early poliomyelitis was reported. Our purpose in this paper is to report the results of such treatment as employed in a series of eighty-one cases.

There is enough evidence [2] at hand to support the view that convalescent serum has definite therapeutic usefulness in poliomyelitis. Most observers, however, have emphasized the value of using such serum intraspinally, with intravenous or intramuscular injection as a less valuable adjuvant. The late E. Charles Fleischner, on the other hand, insisted that on both theoretical and practical grounds the intramuscular route was to be preferred as a means of making the serum quickly and safely available to the early lesion.

Certainly there are definite difficulties in the use of serum intraspinally against which the value of the method must be weighed. It has been experimentally found that the intrathecal injection of normal serum into monkeys in the early stage of the disease hastens and renders more severe the resultant paralysis.[3] One is confronted with the possibility that, since it is not possible to test the potency of all serum before it is used, its introduction into the spine may be definitely harmful unless it has sufficiently great immune properties to exert a helpful effect. Such serum, furthermore, must be carefully prepared, rigidly tested for sterility, and reasonably free from hemolysis and precipitate to be so used with safety. When to these things are added the difficulties not uncommonly encountered in any intraspinal therapeutic maneuver, the method does not commend itself for safety, ease or simplicity.

Poliomyelitis is unquestionably a generalized infection with areas of perivascular inflammation throughout the body as well as in the central nervous system, the virus being disseminated through the blood. It seems logical to suppose that serum can be brought in contact with the virus by way of the blood stream. To use convalescent serum intravenously is again not without difficulties, since preserved serum frequently contains too much precipitate to make this safe; blood grouping would seem desirable, and if employed would restrict the use of given samples to homologous recipients; finally, unpleasant reactions, not easily explained, do occur.

Intramuscular administration is a convenient mode of access to the blood stream, and absorption of human serum by this route is fairly prompt. It presents none of the alarming dangers of intraspinal or intravenous administration. Reasonable asepsis is required, but the method is simple and the presence of precipitate or of hemolyzed blood cells does not introduce any difficulties. As a matter of fact, when serum is not at hand and available convalescent patients can be bled, the whole blood, preferably citrated to facilitate absorption, may be used. The greatest charm of this method is that in the very early case, in which the diagnosis may rest on inconclusive evidence, and even confirmatory spinal puncture may not be feasible, if only serum or a convalescent donor is at hand, the patient can receive simple, effective treatment at the most opportune time possible without being jeopardized in the least.

It is uniformly agreed that the earlier in the disease treatment is instituted, the more one can expect from it. Unfortunately, from the investigative point of view this causes the most spectacular results to be seen in cases which, from the fact that they do not progress to frank paralysis, remain doubtful with regard to what would have happened without treatment; that is, cases which are treated early run an abortive course and it is not possible to prove that without treatment paralysis would have resulted. Parallel series of cases, if one were hardy enough to run them, would hardly clear up this question conclusively, since it is impossible to judge from early symptoms or signs how mild or how severe later developments may be. The exact status of such treatment is dependent on the accumulated results of a sufficiently large number of treated cases.

Preparalytic diagnosis of the disease, so essential to effective treatment, is rarely possible except during an epidemic of poliomyelitis. Early suggestive symptoms or signs are fever, malaise, headache, muscular and back pain, vomiting, irritability, drowsiness, tremor, hyperesthesias, slight muscle weakness, slight reflex changes, neck stiffness and hamstring spasm. Except in rare cases, diagnosis may be confirmed by the characteristic spinal fluid changes, which include cellular increase without visible micro-organisms.

### RAPID EFFECTS OF TREATMENT

In many cases in which it has been possible to make the diagnosis very early and before any paralysis has appeared, regression of symptoms has been prompt; in fact, so prompt that only by the collection of a large number of such cases presenting definitely positive spinal fluid reactions or a history of contact can the accuracy of the diagnosis and the effectiveness of treatment be incontrovertibly proved. A case in point is the following:

CASE 1.—J. M., a Portuguese boy, aged 6 years, referred to the Children's Hospital by the Stanford outpatient department, Aug. 31, 1927, during the height of the local epidemic, had complained of pain in the back, across the shoulders and in

* From the Department of Pediatrics, University of California, and the Children's Hospital.

1. Shaw, E. B.; Thelander, H. E., and Fleischner, E. C.: Convalescent Serum in Preparalytic Cases of Poliomyelitis, J. A. M. A. **85**: 1555-1558 (Nov. 14) 1925.

2. Netter, Gendron and Touraine: Compt. rend. Soc. de biol. **70**: 625, 1910. Amos, H. L., and Chesney, A. M.: J. Exper. Med. **25**: 581-608 (April 1) 1917.

3. Netter, A.: Bull. Acad. de méd. **74**: 403, 1915.

the left leg the night before admission, and during the night was restless and moaned in his sleep. He was flushed and moderately ill looking; the temperature was 102.4 F. rectally, and the pulse, 110. Physical examination showed slight neck rigidity and a slightly positive Kernig sign on the left side. He complained of pain on manipulation, and there was some stiffness and tenderness of the spine. No muscular weakness could be demonstrated. The tendon reflexes were normal. Lumbar puncture at 1:30 p. m. revealed a clear fluid under no apparent increase in pressure. There were 135 cells per cubic millimeter; 90 per cent lymphocytes, and 20 per cent polymorphonuclears. The sugar content was normal. A blood count showed: white blood cells, 6,450; 47 per cent lymphocytes; 40 per cent polymorphonuclears, and 3 per cent eosinophils. No serum was then at hand. At 5 p. m. the child was complaining of pain in both legs, particularly back of the knees and in the calves. He was comfortable with the knees flexed. By 7:30 p. m. he had become more uncomfortable, and in turning from side to side he protected his neck by supporting his head with his hands. The knee jerks were more active than previously. He was given 59 cc. of convalescent serum intramuscularly. Next day his general condition seemed greatly improved. There was still slight neck rigidity, the left knee jerk was more active than the right, and there were noted tremors of the left leg. The following day, September 2, he seemed very well; there was no neck rigidity, but there was still tenderness along the spine. He continued steadily to improve. September 6, there was no tenderness and no nuchal rigidity; the left knee jerk was still greater than the right, but no loss of motor power could ever be demonstrated. September 10, he was able to walk.

Although it is impossible to state that this child would have proceeded, without treatment, to frank paralysis, it is perhaps significant that, eleven days after his admission, a brother of the child was brought to the hospital with a very definite right foot drop and weakness of both quadriceps. The parents had been warned to be watchful for any signs of acute illness but noticed nothing until the paralysis appeared.

### DELAYED EFFECTS OF TREATMENT

Other cases treated comparatively early do not respond so quickly to treatment; but, although fever and general symptoms persist for a time, regression takes place without the development of definite paralysis. Case 2 is illustrative.

CASE 2.—B. R., a girl, aged 6 years, had been a little irritable for two days previous to admission. Aug. 17, 1927, the day before admission, she complained at bedtime of being tired. During the night she was restless, and moaned and talked in her sleep. Next morning she complained of extremely severe generalized headache and vomited once. She was beautifully developed, very alert, talkative and extremely apprehensive. She was flushed and sick looking. The rectal temperature was 101.4 F. Coarse tremors of the muscles of the arms and legs and of the muscles of the trunk were apparent, and on percussion of the chest, marked twitching of the pectoral muscles was occasioned. Nuchal rigidity was present, and the Kernig sign was bilaterally positive. All movements were performed, but she complained of pain in the back when her legs were brought up. The knee jerks were very hyperactive; a faint tap elicited several tremulous jerks. The white blood cells numbered 10,600, with 79 per cent polymorphonuclears.

She was given 23 cc. of convalescent serum intramuscularly immediately on admission to the hospital. An hour later, at 4 p. m., lumbar puncture was done; 15 cc. of clear fluid was withdrawn under estimated increased pressure. This showed 115 cells, 86 per cent lymphocytes, increased globulin, normal sugar content and a colloidal gold curve of 1221000000. At 9:15 p. m., 25 cc. of convalescent serum obtained from a recent case of severe paralysis was given intramuscularly. The following day the temperature varied between 101 and 102.6 F. The patient still seemed quite ill. During sleep there was manifest jerking and twitching of the arms, legs and head. When awakened from sleep, she was much excited and trembled all over. The reflexes were still hyperactive throughout, but less so than on the preceding day; the neck was quite rigid; the Kernig sign was positive, and there was slight unsteadiness of the head. There was no demonstrable paralysis.

At 2:30 p. m. 31 cc. of convalescent serum was given intramuscularly. Next day the patient seemed better; the temperature was 102.2 F. at 4 a. m. and dropped steadily to 100.6 at 4 p. m. Neck rigidity and the Kernig sign were less marked and the reflexes were less active. August 21 she was better, the temperature dropping from 100.2 F. in the early morning to 99.6 by 8 p. m. There was no paralysis or weakness. Thereafter the temperature remained normal, and she steadily returned to normal status in every way. The reflexes were hyperactive for two or three days and the nuchal resistance was perceptible for a like period. No paralysis or weakness was ever demonstrable, and ten days after admission she was normal in every way except that she looked as if she had come through an illness of some severity.

Such patients were watched with extreme anxiety because they did not show the hoped for prompt regression of symptoms. While it cannot be conclusively stated that by means of treatment paralysis was averted, in all the cases (seventeen in this series) in which treatment was instituted in the first forty-eight hours of the disease and before the development of any paralysis, there was no subsequent development of paralysis, other than transitory weakness.

### EFFECT OF TREATMENT IN EARLY BULBAR INVOLVEMENT

The effects of treatment were noted in another group of cases in which early bulbar involvement occurred. It was rarely, if ever, possible to anticipate the development of bulbar palsy on the basis of the earlier symptoms because of the fact that such paralyses occurred early in the course of the disease, and antecedent neck stiffness and similar signs were not encountered. One is again confronted with the impossibility of accurately controlling the effect of serum in arresting the spread of infection; yet the severity of these cases is such that one is encouraged to interpret those like case 3 as indicating the usefulness of treatment.

CASE 3.—J. A., a boy, aged 9 years, was referred to the Communicable Disease Department of the Children's Hospital, Aug. 7, 1927. Two days before admission he seemed feverish and vomited once. Next day he seemed better and little attention was paid to his illness. The day of admission he complained of soreness in the neck, a sense of fulness in the throat and difficulty in swallowing solid foods. He appeared moderately ill, was flushed, and spoke in a husky voice. The temperature was 102 F. rectally. There was definite rigidity of the neck but no Kernig sign, no loss in muscular power of the extremities and no change in the tendon reflexes. His throat was filled with foamy saliva, which accumulated from his inability to swallow properly. There were no disturbances of innervation of the facial or eye muscles. The white blood cells numbered 12,200, with 87 per cent polymorphonuclears. Lumbar puncture performed at 3 p. m. showed a clear fluid under increased pressure containing 33 cells per cubic millimeter, mostly lymphocytes; the globulin was increased. At 8 p. m. the temperature was 104 F.

At 9:30 p. m. the patient was given an intramuscular injection of 79 cc. of citrated whole blood from a patient recently convalescent from paralysis. Next morning the temperature was normal, but it rose to 101 F. in the afternoon. He still had some difficulty in swallowing, spoke with difficulty and complained of the left leg feeling heavy. The neck stiffness was about the same; there was still much foamy saliva in the throat; the left knee jerk was present, but less active than the right.

August 9, he swallowed almost normally, and there was no longer any accumulation of saliva. The left leg and tendon reflex were unchanged, and the muscular power undiminished. The temperature at 2 a. m. was 100.6 F, and at 8 a. m. 102,

V 90
1928

but it was 99 at noon and at 4 p. m. At 1 p. m., however, he was given a precautionary intramuscular injection of 50 cc. of citrated convalescent whole blood. His temperature at 8:30 p. m. was 102.6 F., and at midnight, 100.2. Next morning at 5 o'clock it was 103 F.; at 6 a. m., 100.6, and at 8:30 a. m., 99.8; thereafter it remained normal. August 10, he seemed convalescent; his voice was nearly normal; he swallowed well, and no loss in muscular power could be demonstrated. Thereafter he quickly returned to normal status, and a week after entry no evidence of his infection could be found on physical examination. After dismissal from the hospital it was noted that he did not use the left leg as well as the right and limped slightly for a time when running. This, however, was only transitory.

There is no positive evidence that the treatment averted a fatal outcome or the occurrence of severe paralysis in this case, but the high fever, prostration, and involvement of the voice, deglutition and peripheral musculature indicated a severe process in which the prognosis, as judged by similar cases untreated, is not good, and the absence of any extension after treatment at least encourages belief in the efficacy of such treatment.

### RESULTS OF TREATMENT IN CONSECUTIVE CASES IN THE SAME FAMILY

The occurrence of poliomyelitis in several members of a family has been described as of infrequent occurrence. It has occurred several times in this series and has been observed not infrequently in the recent California epidemic. It offers an interesting commentary on the use of convalescent serum.

CASE 4.—R. T., a boy, aged 7 years, who attended a school in which several cases of poliomyelitis had occurred, on the morning of Nov. 15, 1927, went to school as usual but seemed irritable, looked flushed and during the morning complained of headache. He was well enough to attend a movie in the afternoon, but refused supper and went to bed early. During the night he was restless, his headache became worse, and he developed a pain in the back of the neck and vomited once. Next morning he complained of double vision, and it was observed that he swallowed with some difficulty. He was seen by Dr. James Whitney, who made a diagnosis of poliomyelitis and referred him to the Children's Hospital for treatment. He looked ill, his cheeks were flushed, he was very irritable and he resented any manipulation. He frequently complained of ache at the base of the occiput and in the neck muscles. The temperature was 101.6 F. There was moderate weakness of the left side of the face, uneven closing of the lips in whistling, and drooping of the left angle of the mouth; there was no strabismus and he was not now complaining of double vision. The back was very sensitive to touch and there was definite rigidity of the neck and of the dorsal spine. There was moderate hyperesthesia of the abdomen. Muscle power was poor in both arms, especially the left. All tendon reflexes were present except the right biceps jerk, which could not be elicited. The Kernig sign was bilaterally moderately positive, and he complained of pain in both legs during this maneuver. The white blood count was 7,800, with 80 per cent polymorphonuclears. At 4 p. m. lumbar puncture was done and revealed a clear fluid under increased pressure, a cell count of 179, 20 per cent polymorphonuclears and 80 per cent lymphocytes. Globulin was increased. The sugar content was normal. No organisms were found on smear or culture.

He was given 20 cc. of convalescent serum intramuscularly at 6:30 p. m., and at 8:45 p. m. 50 cc. of whole blood. Next morning, November 17, there was no diplopia, the left side of the mouth drooped slightly, the tongue deviated to the left, and he had slight difficulty in swallowing. He seemed improved over the previous day. At 6:30 that evening the temperature had risen to 102.4 F; he was very restless, looked distinctly ill and had one attack of severe projectile vomiting. He was given 26 cc. of convalescent serum intramuscularly. Next morning he was much improved, and the temperature was 100.2 F. The neck stiffness was almost gone, and the Kernig sign distinctly less. No peripheral muscle weakness was present, and the facial innervation was much better. That afternoon, although he did not appear nearly so ill as previously, the temperature rose to 102.6 F., from which point it gradually dropped, remaining normal after Nov. 21, 1927, six days after entry. Larger amounts of serum were not used because they were not available.

The mother had been warned to be on the lookout for any symptoms developing in the other children of the family, of whom there were six. November 21, six days after the onset of his brother's illness, the second boy, E. T., aged 10, became somewhat ill. Early in the morning he felt nauseated, but could not vomit. At 7:30 a. m. he told his mother that his head and back ached severely. He was examined immediately. He looked distinctly ill; the temperature was 101.8 F.; his face was flushed, with circumoral pallor; there was very appreciable neck rigidity, and the knee jerks were greatly exaggerated. Tremors or the Kernig sign were not noted. The arm reflexes were normal; there was marked dermatographia. Other physical conditions were normal.

At 10:30 a. m. he was given 38 cc. of convalescent serum intramuscularly and at 1:30 p. m. lumbar puncture was done. The fluid was under increased pressure and was distinctly ground glass in appearance. There were 277 cells, 69 per cent polymorphonuclears and 31 per cent lymphocytes. Globulin was increased; sugar was normal. There was no growth on culture. The colloidal gold test was 1221100000. During the afternoon the temperature rose to 103 F.; he looked very ill, complained bitterly of headache, and was distinctly restless. He was given 65 cc. of whole blood from his brother, whose temperature had just fallen to normal, and an additional 10 cc. of serum intramuscularly. Next morning, November 22, he still looked quite ill. During the day the temperature varied between 102 and 103 F. The neck was still very stiff, and there was occasional twitching of the arms. There was no demonstrable paralysis or weakness. All the tendon reflexes were active. At 7 p. m. he was given 50 cc. of whole blood from a patient three months convalescent. Next morning he seemed to be improved, although the temperature was still 102 F. He had much less headache. The following day, November 24, his general condition seemed very good. There was still no paralysis. The maximum temperature was 100.9 F. November 25, he seemed to be convalescing, although there was still slight neck rigidity. Between this day and November 29, his condition seemed excellent and the temperature remained under 100 F. November 29, without any particular subjective symptoms, the temperature rose to 102.2 F., and he complained of some pain in the buttocks at the site of the injections of serum, although this was not at all severe. There was pain on flexion of the neck; slight neck stiffness had persisted up to this time. Next morning, November 30, the temperature was 101 F.; he did not look at all ill and did not complain of any headache but he did complain of pain in the buttocks. The throat was very slightly reddened. It was difficult to account for the secondary rise in temperature. It may have been due purely to an intercurrent pharyngitis. There was a question of infection or reaction in the site of the whole blood and serum injections, and hot compresses were applied to this area. The question of a dromedary type of poliomyelitis gave us great concern, but since the patient did not appear particularly ill and his most marked symptoms were in the buttocks, nothing was done aside from very careful watching. The fever subsided and he proceeded to convalesce uneventfully, being dismissed from the hospital in quarantine, December 7, seemingly perfectly normal and without discernible palsies.

Another brother, L. T., aged 11, remained perfectly well until the evening of November 23, when he did not feel as well as usual, had a slight headache, did not care for food, and felt hot. Next morning, November 24, after he had been up a little while he lay down again because of severe headache. He was seen about noon, at which time the temperature was 101.5 F. He looked distinctly ill; the face was flushed; there was marked dermatographia, the throat was reddened and he had a very slight degree of neck stiffness. There were no other positive physical signs.

Lumbar puncture done at 12 p. m. showed a clear fluid under no increased pressure. The cell count was 15 (13 lym-

phocytes, 2 polymorphonuclears). He was given an intramuscular injection of 80 cc. of citrated whole blood from his brother R. T., who had by this time had a normal temperature for three days. Next morning, November 25, the neck rigidity was somewhat increased and he still complained of slight headache. The temperature at 5 a. m. was 101.8 F., and dropped to 99.6 at 2 p. m. Lumbar puncture was repeated, 5 cc. of clear fluid being withdrawn. The spinal fluid count was 42

TABLE 1.—*Observations in Forty-Three Treated Cases of Poliomyelitis*

| | | | Spinal Fluid | | Treatment | | | Temperature | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Amount of | | | | |
| Case | Age | Clinical Condition Before Treatment | Number of Cells | Percentage Lymph | Hours After Onset | Serum, Cc. | Blood, Cc. | Before Treatment | Time to Return to Normal, Hours | Results and Comment |
| M. S.* | Adult | No paralysis | 25 | + | 9<br>48 | 50<br>70 | — | 104.2 | 12 | No paralysis; second dose given after a rise in temperature at the end of forty-eight hours |
| A. L.* | 8½ yr. | No paralysis | — | + | 12 | 45 | .. | 103.6 | 10 | No paralysis |
| M. G. | Adult | No paralysis | 230 | + | 12 | 92 | .. | 102.2 | 24 | No paralysis |
| G. S. | 1½ yr. | No paralysis | 260 | 15 | 12<br>24 | 42 | ..<br>50 | 102.6 | 48 | No paralysis; brother of K. S. |
| E. T.† | 10 yr. | No paralysis | 277 | 31 | 12<br>24<br>48 | 38<br>10 | ..<br>65<br>50 | 103 | 96 | No paralysis; brother of R. T. and L. T. |
| E. C.* | 5 yr. | No paralysis | 62 | + | 14 | .. | 92 | 105.6 | 12 | No paralysis |
| R. N. | 9 yr. | No paralysis | 601 | 13 | 14<br>33<br>60 | 49<br>23<br>30 | .. | 103 | .. | No paralysis; temporary weakness of left deltoid and abdominal muscles |
| C. K.* | 7 yr. | No paralysis | — | — | 18 | 45 | .. | 104 | 12 | No paralysis |
| B. R.† | 6 yr. | No paralysis | 115 | 86 | 18<br>22<br>48 | 23<br>25<br>31 | .. | 101.6 | 56 | No paralysis; temperature rose to 102.6 F on second day; dropped gradually to normal |
| L. T.† | 11 yr. | No paralysis | 15<br>42 | +<br>+ | 18 | .. | 80 | 101.4 | 24 | No paralysis; brother of E. T. and R. T. |
| T. T. | 2 yr. | No paralysis | 89 | + | 24<br>48 | .. | 30<br>30 | 103.4 | 24 | No paralysis |
| D. Q.* | 3½ yr. | No paralysis | — | — | 24 | 50 | .. | 100.4 | 12 | No paralysis |
| R. T.† | 7 yr. | Diplopia; left facial paresis; difficulty in swallowing | 179 | 80 | 24<br>23<br>48 | 20<br>..<br>25 | ..<br>..<br>50 | .....<br>101.6 | ..<br>96 | No paralysis; temperature rose to 102.6 F. on second day; symptoms cleared promptly; brother of E. T. and L. T. |
| J. M.† | 6 yr. | No paralysis | 135 | 80 | 48 | 59 | .. | 102.6 | 12 | No paralysis; brother of W. M.; untreated paralyzed case |
| K. L. | 4 yr. | No paralysis | 238 | 30 | 48 | 39 | .. | 102 | 36 | No paralysis; temperature rose to 102.6 F. after treatment |
| J. A.† | 9 yr. | Heaviness of left leg; difficulty in swallowing | 33 | + | 48<br>84 | .. | 70<br>50 | 104 | 84 | No paralysis; temporary weakness left leg |
| L. S. | 8 yr. | Slight paresis left face | 43 | 89 | 48 | 50 | .. | 98 | .. | No paralysis |
| M. B. | 4 yr. | Unable to swallow; respirations embarrassed, cyanosis | 33 | + | 50<br>64 | 36<br>17 | ..<br>45 | 101.5 | .. | Died six hours after admittance; first dose given before admission |
| G. K. | 6 yr. | Slight weakness of left arm | 319 | 15 | 60<br>84 | 50<br>30 | .. | 103.4 | 48 | No paralysis; weakness of left arm persisted only for a few days |
| M. I. | 4½ yr. | Both legs paralyzed | 170 | + | 60<br>84 | 16<br>18 | .. | ..... | .. | Both legs paralyzed; rise in temperature to 102.2 F. after treatment |
| H. M. | 10 mo. | Paralysis right arm; weakness left leg | 83 | 97 | 60 | 41 | .. | 101.8 | 24 | Leg returned to normal; persistence of deltoid paralysis |
| B. F. | 3½ yr. | Left facial paralysis | 205 | 86 | 72 | 45 | .. | 100.4 | 48 | Improved; slight paresis of left face |
| A. S. | 6 yr. | Paralysis neck muscles and deltoids; diplopia; difficulty in swallowing; slight respiratory embarrassment | 85 | 35 | 72<br>80 | 36 | ..<br>50 | 103 | 24 | Rapid improvement of bulbar symptoms; paralysis of neck muscles and deltoid persisted |
| S. P. | 3½ yr. | Difficulty in swallowing | 58<br>24 | 84 | 84 | 40 | .. | 102.6 | 144 | Rapid retrogression; no permanent paralysis; aspirated twice with subsequent rise in temperature |
| V. T. | 12½ yr. | Extensive bulbar and limb involvement | — | — | 84 | 15 | 14 | 102.6 | .. | Death |
| L. H. | 17 yr. | Paralysis involving both legs | — | — | 84 | 45 | .. | 101.4 | 48 | Stationary |
| H. M. | 8 yr. | Paralysis right leg; respiratory embarrassment | 196 | 38 | 96 | 50 | .. | 101 | .. | Seemed better at end of twenty-four hours; then became worse and died |
| W. S. | 3 yr. | No paralysis; stiff neck; tremors | 5 | .. | 96 | 35 | .. | ..... | .. | Mild, probably abortive case; no paralysis |
| W. H. | 9 yr. | Nasal voice; difficulty in swallowing; slight respiratory embarrassment | ..<br>80 | ..<br>+ | 96<br>102 | 35 | ..<br>45 | .....<br>101.2 | ..<br>12 | No paralysis; rapid retrogression, probably over peak of infection when treated |
| B. B. | 6½ yr. | No paralysis; diplopia; history of exposure | — | — | 96<br>120 | 16<br>18 | .. | 101.6 | 36 | Dromedary type; treated a few hours after secondary rise in temperature; no paralysis |
| G. H. | 4 yr. | No paralysis | 396 | 94 | 96 | 50 | .. | 102 | 24 | No paralysis; history of long prodrome |
| V. P. | 8½ yr. | Left facial paresis; slight respiratory embarrassment | 8 | + | 96 | 40 | .. | 101 | 60 | Temperature to 102.2 F. after treatment; facial paralysis persisted |
| G. G. | 4 yr. | Bulbar involvement; coma; respiratory embarrassment | 20 | .. | 96 | .. | 25 | 103 | 24 | Paralysis right side of face |
| M. R. | 3 yr. | Marked weakness of all muscles with nasal voice and difficulty in swallowing | 4 | .. | 120 | 40 | .. | Normal | | Complete recovery; no paralysis |
| K. H. | 6 yr. | Paralysis left leg | 274 | 78 | 120 | 52 | .. | 100.6 | 24 | Paralysis left leg |
| K. S. | 4½ yr. | Paralysis left deltoid | 160 | 18 | 120 | 53 | .. | 104 | 48 | No extension |
| H. N. | 14 yr. | Bulbar symptoms; cyanosis; marked respiratory embarrassment | 61 | 56 | 120 | 80 | .. | 101.6<br>105.8 | .. | Death in twenty-four hours |
| I. K. | 6 yr. | Extensive involvement of bulb and limbs | 60<br>30 | 65<br>70 | 132<br>156<br>180 | .. | 25<br>40<br>15 | 104.6 | 72 | Extensive paralysis of limbs |
| I. S. | 11 yr. | Nasal voice; paralysis left deltoid | — | — | 7 da. | .. | 20 | 102 | 48 | Paralysis left deltoid |
| M. M. | 16 yr. | Strabismus; paralysis of both legs | 465 | + | 7 da.<br>8 da. | 50<br>50 | .. | 101<br>102.6 | 48<br>.. | Seen late but in active phase with recent progress; no further extensions |
| J. G. | 1½ yr. | Paralysis left leg | — | — | Late | 25 | .. | 98 | .. | Paralysis left leg |
| M. C. | 10 yr. | Marked bulbar and limb involvement | 267<br>440 | 86<br>46 | Late | .. | 35 | 104 | .. | Died |
| V. S. | 2 yr. | Weakness of back and limbs | 200 | .. | Late | .. | 40 | 100 | .. | Stationary in hospital; apparently a slowly progressive type; after two years, recovery is complete |

* Reported in previous paper.
† Reported in detail in present paper.

V 90
1928

cells. On the following day, November 26, the temperature was 100 F. in the afternoon and on November 27 it was 101.2. Aside from this his convalescence was uneventful.

There is, of course, considerable uncertainty in the diagnosis in this case. The signs, symptoms and spinal fluid reactions were not absolutely confirmatory, but with the history of exposure and very definite suggestive signs the slight increase in the spinal fluid count can hardly be taken except as evidence in favor of a diagnosis of poliomyelitis which was seen at the very beginning of the central nervous system involvement.

### SUMMARY

The material on which this report is based comprises a series of eighty-one patients, of whom forty-three received convalescent serum intramuscularly during the active stage of the disease. The data in these forty-three treated cases, arranged with regard to the time which had elapsed before serum was administered, are assembled in table 1, and a summary of the results of treatment is given in table 2.

TABLE 2.—*Results of Treatment*

| Time of Treatment After Onset of Symptoms | Number of Cases | Paralysis at Time of Treatment | Persistent Paralysis | Deaths |
|---|---|---|---|---|
| From 1 to 48 hours | 17 | 2 (bulbar) | 0 | 0 |
| From 48 to 72 hours | 6 | 5 | 3 | 1 |
| From 72 to 96 hours | 10 | 7 | 3 | 2 |
| Late (after 6 days) | 10 | 10 | 7 | 2 |
| Untreated | 38 | .. | 33 | 3 |

In the total series of forty-three treated cases, there is a total of only thirteen persistent paralyses, all of which occurred in cases treated very late in the febrile stage; while in the thirty-eight cases not treated, thirty-three showed residual persistent paralyses.

### CONCLUSIONS

1. Convalescent serum administered intramuscularly is of distinct value in the treatment of poliomyelitis.

2. The effectiveness of such treatment depends on early diagnosis and treatment, with sufficiently large, and if necessary, repeated doses of potent serum.

3. The method, on account of its ease, safety and simplicity, may be applied in the doubtful case without waiting for confirmatory evidence, and is particularly apt to provide treatment in the early stages when much may be expected as a result of treatment.

4. It is extremely desirable that stores of pooled convalescent serum be made available for general use and particularly that such stores be on hand prior to the outbreaks of actual epidemics.

384 Post Street.

**Progressive Education.**—The movement in this country known as progressive education is in the right direction. Also, in many public schools certain good measures are being adopted to further healthy, happy learning. The classroom is becoming more informal. More teachers now are turning their attention to the learner, considering how he feels when he tries to study and recite. The tendency to motivate learning around life problems and to break classes up into smaller learning groups, thus furthering cooperative school activity, are very promising. There also are developing a wide variety of self-teaching texts and learning exercises at which children are allowed to work at their own speed. A few schools are making honest efforts to reduce the number of specific facts which children are supposed to learn in a given time. But these good things are coming slowly, while the flood of speeding rushes on with terrible vehemence.—Myers, G. C.: *Ment. Hyg.* **12**:23 (Jan.) 1928.

## CHROME ULCERS

### REPORT OF TWELVE CASES

JACKSON BLAIR, M.D.
CLEVELAND

Becourt and Chevallier, in France in 1863, were the first to publish a definite description of the lesions of chrome poisoning. At that time most of the cases of chromium poisoning were found in those engaged in the manufacturing of the various salts of chromic acid, especially the bichromates of potassium and sodium, which required elaborate processes of boiling, evaporation, roasting and grinding, thus exposing the workmen to irritant fumes, dusts and solutions with consequent poisoning in many cases. These bichromates have been used in many of the arts, in the production of pigments and dyestuffs, in photographic work, in the manufacture of colored glass, and in steel making, thus resulting in additional cases.

The recent widespread use of chrome or chromium plating in the automobile and allied industries for the purpose of producing a rust-proof, nontarnishing finish for headlights, radiator shells, door handles and fixtures has added very materially to the number of cases of chrome poisoning and chrome ulcers, concerning which I report twelve cases.

These cases occurred in two separate plants in the process of electroplating automobile accessories. The electrolytic solution contains a solution of chromic acid, and in the process there is a fine spray of chromic acid given off over the tank by the evolution of hydrogen at the cathode, the bubble of hydrogen being covered with a film of chromic acid solution. This spray is very fine, appearing almost as a gas, and is brownish. The workmen engaged in this work may inhale the fine particles and may soon develop acute symptoms of a bad cold with coryza, sneezing, watery discharge from the eyes and nose, and itching and burning of the nose. This is much more marked when the workmen leave the plant and come in contact with the outdoor air. Four of my patients presented these symptoms; two of these showed marked congestion of the nasal mucosa with hyperemia, swelling and mucoid discharge, and with small ulcers. Another had a large ulcer on the right side of the septum and the fourth had already developed a perforation of the septum, approximately 1 cm. in diameter, in the cartilaginous portion of the nose.

The remaining eight patients, who were engaged in removing the plated parts from the tanks, complained very little of any nasal symptoms, but all had ulcerative lesions of the hands and fingers, or the so-called chrome holes or chrome ulcers. In practically every case the nails were discolored a yellowish brown, and various portions of the skin were also discolored, but the ulcers themselves had developed only where there had been a preceding scratch, cut or break in the skin. The ulcers were painful and deep, with sloughing of the entire layers of the skin. The separation of the sloughs were rather slow in all cases, but healing was fairly rapid when a clean base was obtained.

### TREATMENT

The following prophylactic measures were found very efficient in limiting the incidence of these cases: the establishment of an efficient ventilating system with hoods over the tanks, the wearing of long-sleeved rubber gloves, and the use of petrolatum applied to the

inside of the nose. A 5 per cent solution of sodium hyposulphite has been found useful to neutralize completely the chromic acid on the hands of workers not using gloves. Protective respirators were used for a time, but the efficient ventilating system apparently seems sufficient to prevent the nasal symptoms.

7405 Detroit Avenue, N.W.

## MECHANICAL TREATMENT OF EXPERIMENTAL RATTLESNAKE VENOM POISONING *

DUDLEY JACKSON, M.D.
SAN ANTONIO, TEXAS
AND
W. T. HARRISON, M.D.
Surgeon, U. S. Public Health Service
WASHINGTON, D. C.

In the United States dangerous poisoning by the bite of the rattlesnake is comparatively infrequent, but deaths do occur in some sections of the country where these snakes are particularly abundant and of large size. Bites in children are especially dangerous, probably because of the low body weight in proportion to the amount of venom injected. One of us [1] has shown that it is possible to remove venom from the tissues by mechanical means, and the experiments here reported are in the nature of a confirmatory report.

The venom used throughout these experiments was an unrefined, air dried product which was dissolved in a solution composed of equal parts of glycerin and 0.85 per cent sodium chloride solution, in the proportion of 0.050 Gm. of dried venom to 1 cc. of solution. This stock solution of venom was kept at 10 C. The dogs used were of varying sizes and of the mixed breeds usually found on the city streets.

The minimal lethal dose was approximately determined by injecting dogs with doses varying from 1 to 6 mg. of venom per kilogram of body weight. The venom solution without further dilution was injected into the subcutaneous tissues of the outer aspect of the hind leg just above the hock, effort being made to introduce the venom as deeply into the tissues as would the fangs of the average snake. The injections were given in as nearly uniform a manner as was possible. All dogs receiving 2 mg. per kilogram of body weight, or more, died from twenty-four to forty-eight hours after injection.

All dead animals showed the typical lesions of poisoning by rattlesnake venom; viz., enormous swelling and hemorrhagic edema of the injected leg with hemorrhagic degeneration of the regional lymph glands. Two milligrams of venom per kilogram of body weight was taken as the minimal lethal dose, which was probably considerably more than the smallest amount required to kill, since death occurred under forty-eight hours in the animal injected with this dose.

### REPORT OF EXPERIMENTS

EXPERIMENT 1.—An investigation was next carried out to test the effect in poisoned animals of incision of the part and application of suction. Four dogs were injected with 4 mg. of venom per kilogram of body weight, which was at least two minimal lethal doses. No treatment was administered to dogs 7 and 8, while dogs 9 and 10 were treated as follows:

At the beginning of treatment in both animals a tourniquet was applied above the injection to restrict venous return. In dog 9, five minutes after injection, multiple skin incisions extending into the subcutaneous tissues were made over the site of the injection with a small scalpel, and suction was applied by means of a rubber bulb attached to a small inverted glass funnel. This apparatus is similar to any ordinary breast pump or to Bier's hyperemic outfit. Suction was continued at intervals during the following twenty hours for a total of one hour and forty minutes, in five applications.

Dog 10 was treated one hour after the injection of venom by the same method as dog 9, but owing to the enormous swelling that had developed the simple incision of the skin was followed by the spontaneous escape of a large amount of bloody serum before the application of suction. Treatment was continued in this animal at intervals during the following twenty hours for a total of two hours and nineteen minutes, in five applications.

The results in these four dogs are shown in table 1.

TABLE 1.—*Results of First Experiment with Suction*

| Dog | Weight (Kg.) | Sex * | Milligrams per Kilogram | Milligrams Injected | Treatment | Result |
|---|---|---|---|---|---|---|
| 7 | 11.4 | ♂, ♀ | 4 | 45.6 | None | Dead 22 hours |
| 8 | 6.4 | ♂, ♀ | 4 | 25.6 | None | Dead 41 hours |
| 9 | 6.0 | ♂, ♀ | 4 | 24.0 | Incision and suction | Dead 112 hours |
| 10 | 9.0 | ♂ | 4 | 36.0 | Incision and suction | Dead from 96 to 112 hours |

* In the tables, ♂ indicates male; ♀, female.

EXPERIMENT 2.—On account of the late death of dogs 9 and 10, it was decided to repeat experiment 1, two dogs to be treated—one after five minutes and one after one hour—and a third to serve as a control. Table 2 shows the result of this experiment.

TABLE 2.—*Results of Second Experiment with Suction*

| Dog | Weight (Kg.) | Sex | Milligrams per Kilogram | Milligrams Injected | Treatment | Result |
|---|---|---|---|---|---|---|
| 14 | 10 | ♂ | 4 | 40 | Incision and suction | Recovered |
| 15 | 10 | ♂ | 4 | 40 | Incision and suction | Recovered |
| 18 | 20 | ♀ | 4 | 80 | None | Died within 48 to 70 hours |

Dog 14 was treated with tourniquet and suction beginning five minutes after injection and continued at intervals during the following thirty hours for a total of one hour and fifty-nine minutes, in seven applications. This dog survived, showing necrosis of skin and fascia at the site of inoculation 2 by 4 cm. in extent, which healed during the next few days.

Dog 15 was treated in the same manner as dog 14, except that treatment was not begun until after the lapse of one hour from the time of the injection, and was continued during the next twenty-nine hours for a total of one hour and forty-nine minutes, in six applications. This dog survived, showing two areas of necrosis at the site of injection, each about 1 by 1 cm. in extent, which healed without difficulty.

* From the Hygienic Laboratory.

1. Jackson, Dudley: First Aid Treatment of Snake Bite, Texas State J. Med. 23: 203-209 (July) 1927.

V 90
1928

Dog 18 (control) died in from forty-eight to seventy hours, showing a very large local swelling with the usual signs of venom poisoning.

EXPERIMENT 3.—This was carried out to determine whether the bloody fluid which is removed from the tissues of dogs poisoned with venom is poisonous for other dogs, and whether such fluid is poisonous if removed after a considerable interval following injection of venom (three hours).

Dog 11, a male, weighing 11 Kg., was injected with 10 mg. of venom per kilogram of body weight (five minimal lethal doses) and treatment with tourniquet and incision and suction was begun five minutes after injection. Several skin vessels were cut in this animal, which caused some troublesome bleeding. During the first three hours following the injection of venom, 50 cc. of bloody fluid was collected and set aside for injection into another dog. During the fourth hour of treatment, 35 cc. of bloody fluid was removed. Dog 11 died approximately twenty-four hours after injection, showing the usual signs of venom poisoning.

Dog 12, a male, weighing 9 Kg., was injected in the inner surface of the thigh with the 50 cc. of bloody fluid removed from dog 11 during the first three hours of treatment. This animal died in less than eighteen hours, showing marked signs of venom poisoning. Hemorrhagic exudate was marked, extending over the abdomen to the chest; the colon and duodenum were injected, and the lymphatics of the leg and the abdomen were hemorrhagic.

Dog 13, a male, weighing 7 Kg., was injected with 35 cc. of bloody fluid removed from dog 11 beginning three hours after the injection of venom into the animal. A large swelling of the leg followed by necrosis at the site of injection was observed, followed by recovery.

EXPERIMENT 4.—This was done to determine whether the fluid removed from injected dogs is susceptible of neutralization in vitro by specific antivenin.

Dog 19, a male, weighing 10 Kg., was injected with 8 mg. of venom per kilogram (four minimal lethal doses) and treatment was begun in one hour and three minutes. Multiple skin incisions were made over the site of injection and many simple skin punctures were made over the entire surface of the swollen leg. A very large amount of bloody, serous fluid escaped spontaneously. Suction was continued for forty-five minutes, 50 cc. fluid being removed. This fluid was divided into two parts; one part was mixed with 10 cc. of antivenin (North American) and the other with 10 cc. of diphtheria antitoxin. These mixtures were set aside at room temperature for one hour and injected into two dogs as follows:

Dog 20, a female, weighing 8.8 Kg., received the 25 cc. of fluid from dog 19 to which the diphtheria antitoxin had been added. This animal died after from seventy-two to ninety-six hours, showing typical lesions of venom poisoning.

Dog 21, a female, weighing 10 Kg., received the 25 cc. of fluid from dog 19 to which the antivenin had been added. This animal showed slight swelling at the site of inoculation which soon disappeared. No other symptom was observed, the animal remaining well.

Dog 19, originally injected with four minimal lethal doses of venom, showed necrosis of the skin and fascia at the site of inoculation, in extent approximately 4 by 5 cm. The animal recovered.

COMMENT

It is quite evident that rattlesnake venom experimentally injected into dogs can readily be removed from the tissues by incision and suction, an animal receiving as high as four minimal lethal doses recovering when treatment has been delayed for one hour. This highly toxic material will escape in part from the edematous tissues if simple multiple punctures of the skin are made. That this fluid is highly toxic is shown by the fact that when injected in other dogs it will cause death with all the signs of venom poisoning. The poison contained in this fluid is neutralized in vitro by the specific antivenin and is not affected by diphtheria antitoxin; that the toxic fluid which is removed contains venom cannot therefore be questioned.

The experimental evidence here presented would seem to constitute a rational basis for employing this method in the treatment of rattlesnake bite in human beings, either alone or in conjunction with antivenin.

## RUPTURE OF HEPATIC ABSCESS INTO THE ABDOMINAL CAVITY AND INFERIOR VENA CAVA

R. B. McKNIGHT, M.D.
CHARLOTTE, N. C.

Rupture occurs in about 28 per cent of all cases of hepatic abscess.[1] In 168 cases reported in Tice's Practice of Medicine, the pleura, pericardium and lungs lead in relative frequency as to the site into which rupture may occur. The stomach, colon, lumbar region, bile ducts, inferior vena cava and kidney follow in order with rare case reports.[1] Waring,[2] as early as 1854, in a series of sixty-eight ruptures, reported three cases of liver abscess communicating with the inferior vena cava either directly or indirectly through the right hepatic vein. In one of these patients the abscess was single, in the other two multiple. The largest opening in the vein that I have found reported is that in Colin's[3] case in 1873: "The autopsy showed the abscess connected with the inferior vena cava by an opening the size of a franc piece." The abscess was single. Flexner[4] commented on Colin's case, and at the same time reported two such cases, occurring in 1893 and in 1896, seen by him at the Johns Hopkins Hospital. In reporting his autopsy observations he said:

1. The inferior vena cava passes directly across the upper portion of this cavity, and at a point 2 cm. from the superior border of the liver it is occupied by a thrombus which about half fills the lumen; on removing the thrombus two perforations—one the size of a split-pea, the other of a poppy seed—were disclosed. These led directly into the cavity of the liver.

2. This abscess was, indeed, not entirely limited posteriorly by the thickened capsule of the liver, for it involved the adventitial coat of the inferior vena cava and had ruptured into this vessel near the point of entrance of the hepatic veins. The opening measured 1.5 mm.

In both these cases the abscesses were multiple. Dass,[5] in 1897, reported a single large abscess cavity in the right lobe in contact with the vena cava:

The abscess in one place is perforated into the vein, by a small branch of it, about 1/20 inch in diameter. Through the left of the vena cava, the abscess was found ruptured into the peritoneum, and through this, the blood from the vena cava entering the abscess cavity escaped into the peritoneal cavity.

I do not interpret this description to mean that the abscess had ruptured directly into the abdominal cavity.

1. Tice, Frederick: Practice of Medicine, Hagerstown, Md., W. F. Prior Company, Inc. **4**, 1921.
2. Waring, J.: An Inquiry into the Statistics and Pathology of Some Points Connected with the Abscess in the Liver as Met with in the East Indies, Trebandrum, 1854, p. 80.
3. Colin, Leon: Abces du foie; ouverature dans la veine cave ascendante; collections purulentes consécutive dans les poumons, Le courrier médical et la reforme médicale **23**: 268, 1873.
4. Flexner, S.: Perforation of the Inferior Vena Cava in Amebic Abscess of the Liver, Am. J. M. Sc. **113**: 553-558, 1897.
5. Dass, K. N.: Notes on a Case of Hepatic Abscess in Which the Inferior Vena Cava Burst into the Abscess Cavity: Aspiration, Indian Lancet **9**: 126-127, 1897.

Indeed, Dass' description of the conditions found at autopsy is somewhat vague. Other cases of communication of a liver abscess cavity with the vena cava have been observed. Sarda and Oulie [6] in 1901, Risquez [7] in 1916 and MacNeal and Klemperer [8] in 1925 reported a case each. Clark [9] in 1925, studying the records of 186 postmortem examinations of amebic lesions from the files of the Board of Health Laboratory of the Panama Canal Zone, mentions a rupture of a surgically drained abscess into the vena cava.

To these eleven cases of communication of the hepatic abscess with the inferior vena cava, I have a twelfth to add. The patient was seen and operated on by me in Charlotte, Aug. 28, 1927.

## REPORT OF CASE

A negro man, aged 42, was admitted to the Good Samaritan Hospital about 8 p. m., with a diagnosis of an acute abdominal condition, probably ruptured appendix or gangrenous appendicitis.

Very little family history was obtainable, as he knew practically nothing about his family.

He was not married and lived alone in a small house under rather poor hygienic conditions. He had a good reputation as a day laborer with a local manufacturing concern. He had lived in North Carolina all his life.

The past medical history was negative except that he had had a course of arsphenamine injections several months before, and that for the past week he had been feeling below par. There was no history of gastro-intestinal trouble of any kind. He stated that he had never had any "misery in his stomach," and that he had always enjoyed good health.

Two days previous to admission he suffered a sudden attack of severe pain in the epigastric region, accompanied by nausea and vomiting. He had some fever with this attack. The next day the symptoms had subsided until there was very little pain and he felt much better generally, although he remained in bed because of extreme weakness. About an hour before admission to the hospital he again experienced an attack of pain much more intense than the former attack. This pain was generalized over the abdomen, although he felt it most in the upper portion, and it was accompanied by a feeling of extreme prostration. There was no vomiting, but nausea was marked. I saw him within half an hour after admission.

He was rather slender and was obviously seriously ill. The temperature was 102.6 F., the pulse 120 and of poor quality, and respirations about 30. He complained very little of pain when lying flat on his back, but when he attempted to sit up pain was very severe in the epigastric region. The heart sounds were rapid and weak. The lungs seemed clear. The abdomen was distended and very tender and felt doughy and mushy; fluid was present. The most acute areas of tenderness were in the epigastrium and right lower quadrant. Laboratory facilities are lacking in the Good Samaritan Hospital; indeed, there was little time for any laboratory work. I made a white cell count, which was 14,000. A semiliquid stool was negative for gross blood.

I did not make a tentative diagnosis other than an acute abdominal condition requiring immediate surgical intervention.

Under morphine narcosis and light ether anesthesia a right rectus incision was made. On exposure of the peritoneum, blood was seen underneath. A liter or more of blood was in the abdominal cavity; this consisted of both clots and fresh blood. The appendix was normal in appearance and was not disturbed. The blood was sponged out as carefully as possible, but it reaccumulated with alarming rapidity. The intestines appeared normal except in the upper part of the abdomen, where there was an area of localized peritonitis about the structures immediately underneath the right lobe of the liver. Ulcer of the stomach or of the duodenum could not be demonstrated. The liver was moderately enlarged and the gallbladder distended and under considerable tension. There was a deep cavity in the right lobe extending into the liver tissue about the length of the index finger. Blood was emerging from this rupture. The liver tissue adjoining the cavity was unusually friable. Bleeding was quite free and it was difficult to differentiate the surrounding structures. The cavity was packed with iodoform gauze; two Penrose drains and a split rubber tube were placed for drainage, and the abdomen was rapidly closed. Routine antishock and antihemorrhage treatment was instituted, but before a transfusion could be given the patient died.

Autopsy was absolutely refused by those claiming the body. After much arguing I did get permission to open the wound, examine the liver and excise a portion of liver tissue adjacent to the cavity. The abscess was single, about the size of a small orange, and located in the right lobe. The point of rupture was just to the left of the gallbladder and ducts. The examining index finger encountered a small opening at the upper median posterior aspect of the cavity and on gentle pressure emerged into a tube, which on further investigation proved to be the inferior vena cava. This communication was about at the point at which the right hepatic vein enters the cava. The excised piece of tissue was reported acute abscess of the liver by two pathologists. Neither could demonstrate the presence of ameba.

## COMMENT

This is the only case I have been able to find among those reported in which ruptures into the abdominal cavity and into the inferior vena cava occurred practically spontaneously, taking place within forty-eight hours of each other, thereby allowing sufficient time for peritonitis to develop. The vena cava probably ruptured into the abscess cavity as a result of the phlebitis and the release of tension against its wall. Death occurred in about three hours after the second attack of pain, at which time the perforation into the wall of the vena cava undoubtedly took place. The rather long interval between rupture and death can be accounted for by the small size of the perforation, the intra-abdominal tension and the gauze pack. In the series of cases reported, communication was established directly into the vena cava at a point near the junction of the hepatic veins with the cava or into the right hepatic vein immediately distal to this junction. In my case the immediate cause of death was intra-abdominal hemorrhage; in the others, with the possible exception of Dass' case, death may be explained by remote causes originating in an influx of purulent material from the abscess cavity into the vascular system. In every case the perforation was from an abscess in the right lobe, and diagnosis was made at postmortem examination.

Professional Building.

6. Sarda, H., and Oulie, A.: Abcès du foie, phlébite de la veine cave inférieure, mort subite, Toulouse méd. **3**: 121-129, 1901.
7. Risquez, J. R.: Una complicacion poco frecuente del absceso hepatico, Gac. méd. de Caracas, **23**: 121, 1916.
8. MacNeal, W. J., and Klemperer, P.: Amebic Abscess of the Liver, Am. J. Trop. Med. **5**: 339-349 (Sept.) 1925.
9. Clark, H. C.: The Distribution and Complications of Amebic Lesions Found in One Hundred and Eighty-Six Postmortem Examinations, Am. J. Trop. Med. **5**: 157-171 (March) 1925.

**How to Keep Well; Periodic Health Examinations.**—The public is beginning to realize that it is much better and easier to keep well than it is to regain health after it has been impaired. It is also beginning to know that the way to do this is to be examined at stated intervals by one's physician. We, as physicians, should realize that much of our work in the future will be along these lines and we should encourage it and should prepare ourselves to do this work in a thoroughly systematic manner. We should perfect ourselves in normal conditions, that we can more readily discover any departure from them. These examinations should include every member of the family, and a record of each one examined be carefully kept. These examinations which bring the physician into close touch with his families will do more to restore the relations which formerly existed between the family physician and his patients than any method which has ever been suggested.—Emerson, G. S.: *New England J. Med.* **198**:90 (March 1) 1928.

V 90
1928

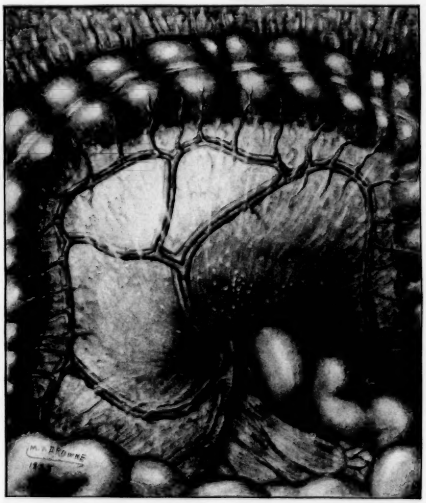
# FAT NECROSIS AT AN OBSCURE LOCATION *

P. E. TRUESDALE, M.D.
FALL RIVER, MASS.

To the surgeon, fat necrosis is a familiar pathologic reality. It is a pathognomonic sign of rapidly destructive changes in the pancreas. In appearance it takes the form of small opaque white areas which are signposts of impending danger from hemorrhagic necrosis or other forms of acute fulminating infection of the pancreas. The recognition of these small chalky spots during an operation, therefore, becomes a matter of vital importance. They may be present but not apparent. When few and widely scattered they may easily escape recognition, especially if one does not have them in mind. My object in this communication is to stress the importance of searching for fat necrosis in all cases of acute infection of the gallbladder and bile ducts, and to point out a concealed area where fat necrosis may be found before it appears on the peritoneum ordinarily limited within the surgeon's range of view.

Chronic pancreatitis with palpable enlargement at the head of the pancreas is a common discovery during an operation on the gallbladder or bile passages for cholecystitis or cholelithiasis. Fat necrosis is not present when the inflammatory process in this region is quiescent. It is associated only with the acute exacerbations of chronic inflammation associated with severe primary infection of the pancreas.

The following case shows an unsuspected field on which fat necrosis was present but was discovered only at autopsy.



Numerous scattered small white areas of fat necrosis on the under surface of the transverse mesocolon.

## REPORT OF CASE

A man, aged 54, had a necrotic appendix removed in June, 1923, at which time examination of the gallbladder revealed several stones in its contents. The patient was advised to return for cholecystectomy if he had symptoms which could be attributed to their presence.

Sept. 4, 1925, he entered the hospital with an acute severe attack of upper abdominal disturbance of five days' duration, the origin of which was assumed to be an infectious process in the gallbladder and bile passages. He was urged to enter the hospital for operation on the second day but refused. His temperature had ranged between 102 and 103 F.; the leukocyte count was 15,900. There was a slight degree of jaundice, but in the urine there was no bile or other abnormal constituents. His appearance was that of a very sick man. The abdomen was somewhat distended, especially across the epigastric region. There was muscle resistance and tenderness over the right upper rectus. The pulse rate was 90.

September 5, the abdomen was opened through a right rectus incision. The peritoneum was everywhere rather deeply injected. The gallbladder was adherent to the surrounding structures, and its wall was of a dull red texture, distended and thickened. The gallbladder was removed. When laid open it was found to contain many stones of various sizes, one of which was wedged in the opening of the cystic duct. The pancreas was definitely enlarged, somewhat irregular and indurated. There was redness of the peritoneum throughout the upper abdominal region, but no areas of fat necrosis were apparent nor were the tissues overlying the pancreas discolored in the manner so often characteristic of hemorrhagic necrosis. However, in view of the enlargement of the pancreas, the common duct was opened and a drainage tube inserted. The patient died, September 10, ten days after the onset of the attack and five days after operation.

At the postmortem examination a search of the field of operation for fat necrosis was made but none found. When the omentum and transverse colon were lifted back, however, there was disclosed on the under surface of the transverse mesocolon in juxtaposition with the pancreas a sizable field with multiple areas of fat necrosis. Further examination demonstrated the pancreas in a state of hemorrhagic necrosis.

The accompanying illustration shows areas of fat necrosis on the transverse mesocolon in close proximity to the pancreas, substantially as found in this case. Others had not appeared elsewhere on the peritoneum. Those present were entirely screened from view by the gastrocolic mesentery, transverse colon and great omentum.

## COMMENT

I have since seen two cases of a similar nature. In one the fat necrosis was limited to the under surface of the transverse mesocolon; in the other, areas of fat necrosis about the pylorus were present as a scattered few small white points, found only after I had discovered the field of multiple areas on the under surface of the transverse mesocolon.

In 1882, Balser [1] directed attention to disseminated focal fat necrosis associated with acute hemorrhagic pancreatitis and appearing as small white areas composed of necrotic fat cells. Opie [2] states that the more minute foci limited to fat within or on the organ, when carefully sought for, are often found at autopsy. He attaches considerable importance to the recognition of fat necrosis, because it always indicates grave alterations of the pancreas sometimes resulting in gangrene. In Opie's work no mention is made of the clustered manifestation of fat necrosis on the transverse mesocolon. While fat necrosis is almost invariably limited to the peritoneum, Hansemann [3] has observed foci in the subcutaneous tissue. Langerhans [4] has referred to

* Read before the Newport (R. I.) Medical Society and Officers of the U. S. Naval Hospital, Newport, R. I., March 15, 1928.

1. Balser: Ueber Fettnekrose, Virchows Arch. f. path. Anat. **90**: 520, 1882.
2. Opie: Diseases of the Pancreas, Philadelphia, J. B. Lippincott Company, p. 176.
3. Hansemann: Verhandl. d. Berl. med. Gesellsch., Dec. 4, 1889.
4. Langerhans: Ueber multiple Fettgewebsnekrose, Virchows Arch. f. path. Anat. **122**: 252, 1890.

the process of extensive fat necrosis of the surrounding tissues in which the pancreas becomes entirely disconnected from the tissues surrounding it.

The microchemical and tissue changes that take place in the process of fat necrosis have been described by Langerhans. They consist in a splitting of the fat molecule into its fatty acid and the soluble constituent glycerin. Fatty acids are deposited as needle-like crystals within the cell, which has lost its nucleus and becomes necrotic, while the soluble glycerin is absorbed. Very soon the fatty acids unite with the calcium salts, and within the cellular outline which is still preserved are irregular, often globular, masses in which the presence of lime salts may be demonstrated by microchemical reactions.

Welch [5] has isolated bacteria from the areas of fat necrosis. *Bacillus coli* has been identified in hemorrhagic pancreatitis with fat necrosis. However, bacteria have been demonstrated in only about 50 per cent of the cases.

151 Rock Street.

## VARICES OF THE LOWER LIMBS

### TREATMENT BY OBLITERATING INJECTIONS BASED ON EXPERIENCE WITH MORE THAN FOUR THOUSAND INJECTIONS

JACQUES FORESTIER, F.A.C.R., M.D.
AIX-LES-BAINS, FRANCE

The injection of an appropriate caustic solution into the cavity of a varicose dilatation of the lower limbs can bring about an absolutely aseptic irritation of the endovein and the complete obliteration of the vessel; this is the principle on which is based this medical curative method. Furthermore, this obliteration of the vein takes place in most cases without pain and without any disturbance of the deep circulation, and does not interfere with the habitual occupations of the patient, which is one of its main advantages.

Long ago, after the introduction of Pravaz's syringe injection, the idea arose of treating varicose dilatations by obliterating injections. I shall refer merely by way of record to the old attempts of Chassaignac and Pravaz, by means of ferric chloride; of Valette, by means of the iodotannic liquor, and of Schiassi, by means of red mercuric iodide. These former attempts failed because the liquid used was too caustic and the lack of asepsis brought about infections, and occasionally such serious complications as gangrene and lymphangitis.

During the war, Sicard,[1] having noticed that certain solutions on being injected into the veins of the bend of the elbow brought about their obliteration without pain, decided to investigate the cause of such obliteration and found that it was due to the alkalinity of the solutions. He then hit on the idea of applying this property of alkaline solutions to the treatment of varices, and he was led by his researches, carried out with the cooperation of Paraf and myself, to recommend [2] injections of sodium carbonate in concentrated solution.

This salt, an excellent sclerosing agent, has only an historical interest, because its objectionable features lay in its causticity; the slightest drop outside the vein brought about necrosis of the skin. Since that time, other solutions have been recommended that meet the requirements satisfactorily. These I shall now consider.

5. Welch: M. News **59**: 669, 1891.

1. Sicard, J. A.: The Treatment of Varices by Intravaricose Injections of Sodium Carbonate, Marseille méd., number 3, Jan. 23, 1920, p. 67.

2. Sicard, J. A.; Paraf, J., and Forestier, Jacques: The Radical Cure of the Varices of the Lower Limbs by Injections of Sodium Carbonate, J. méd. franç. **10**: 45 (Sept.) 1921.

### TECHNIC

A. *Solutions to be Injected.*—It may be stated in a general manner that there are a very large number of mineral substances capable of bringing about the obliteration of the veins, but we have confined ourselves to a small number of such substances, which have enabled us to secure satisfactory results. We resort mainly to three different substances:

1. Sodium salicylate, which we use in three different concentrations, 20, 30 and 40 per cent:

Twenty per cent solution: sodium salicylate, 1 Gm.; distilled water, 5 cc. (sterilized for one ampule).

Thirty per cent solution: sodium salicylate, 1.5 Gm.; distilled water, 5 cc. (sterilized for one ampule).

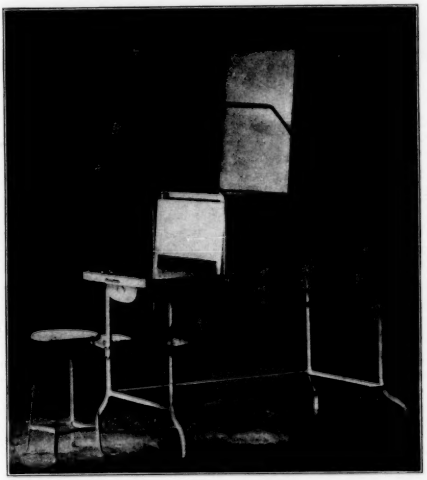


Fig. 1.—Table for injections of varicose veins (Dr. Vacheron) arranged for the puncture of the vein in the sitting position.

Forty per cent solution: sodium salicylate, 2 Gm.; distilled water, 5 cc. (sterilized for one ampule).

Two, three and even four of these ampules may be injected at the same time at different points, as I shall show later on.

As a rule we do not exceed a total of 5 Gm. of sodium salicylate at a time.

2. Red mercuric iodide, which has been recommended by Montpellier and Lacroix, and which we use in the following solution: red mercuric iodide, 1 cg.; sodium iodide, 1 cg.; distilled water, 1 cc. (sterilized for one ampule).

Occasionally twice the standard dose of red mercuric iodide may be injected at a time. No more than two injections should be made, as, in certain patients, phenomena of mercurial intolerance are apt to occur.

3. Quinine, which has been recommended by Genevrier, according to the following formula: quinine hydrochloride, 0.4 Gm.; urethane, 0.2 Gm.; distilled water, 3 cc. (The content of one ampule is as a rule

V 90
1928

sufficient to make injections at two or three different points. No more than 6 cc. of solution should be injected in one day.)

Aside from these standard solutions, several other solutions have been recommended, as has been pointed out, for the sclerosing of the veins: sodium citrate (Troisier); sodium chloride, very concentrated (15 per cent),[3] or dextrose in the same degree of concentration; also mercuric cyanide, 1 cg. per cubic centimeter. As far as we are concerned, we have never made use of the latter substances.

B. *Instruments.*—These are very simple, consisting mainly of 3 or 5 cc. syringes generally of glass (Luer), with steel, nickel or platinum short-beveled needles 2 or 3 centimeters long and of a diameter from 0.5 to 0.6 mm.

The equipment should be a very good one because an intravaricose injection is more difficult than an ordinary intravenous injection and it is absolutely necessary to possess a perfect technic to avoid a few drops of caustic liquid escaping from the vein at the time of the injection.

C. *Posture of the Patient.*—There are three different postures available for the injection: standing on a table, sitting or lying down. We state at once that we discard the use of compressive bandages to cause the veins of the patient to project.

We have used the standing and sitting postures for a long time because these postures facilitate the puncture of the vein, but it is necessary for the same posture to be continued throughout the duration of the injection, and, as it is desirable for the muscles to be released, the sitting position is generally more suitable than the standing posture.

For the last three years we have been giving the preference, as Sicard and Gaugier [4] do, to the recumbent position, because, as one may well anticipate, it tends to give better results; the vein not being filled with blood, the injected liquid in contact with the endothelium is in a greater concentration. This recumbent posture with released muscles is furthermore the most favorable, as will be shown later on, to prevent the penetration of the caustic liquid into the deep veins. The use of a special table (Vacheron) on which the patient may pass rapidly from the sitting (puncture) to the lying (injection) position (figs. 1 and 2) facilitates the treatment.

D. *Modus Operandi.*—This is extremely simple; it consists in an intravenous injection which presents only the difficulty of being performed on very twisted and often shifting veins which cannot be made tense by a bandage. We used to reach the veins laterally by piercing the skin first and then the wall of the vein, in two stages. It is advisable after the perforation of the wall to push the needle 1 or 2 mm. farther, to make sure that the catheterizing of the vein is well done and that no liquid oozes out of the vein.

The injection is carried out slowly, while signs of edematous swelling are looked for in the surrounding tissues. On the completion of the injection, the needle may be left a moment in its position or it may be withdrawn, a small wad of absorbent cotton being put in its place at the point of injection to prevent the reflux of the liquid out of the vein.

E. *Conduct of the Treatment.*—Each varix has its own reactive power which is independent of the degree of dilatation, and it is therefore for the physician to graduate in each case the concentration of the caustic agent and to use the weakest solution that will prove efficient. It is as a rule impossible to anticipate the manner in which the vein will sclerose; certain large veins respond immediately to a weak injection, while smaller veins may require several repeated injections of increasing concentration at the same point.

Generally we begin the treatment by injecting 3 or 5 cc. of the 20 per cent sodium salicylate solution. During the next sitting the same concentration is used if a proper reaction has been obtained; if not, the 30 per cent is injected. In cases responding feebly to the treatment, the 40 per cent solution should be injected. The only drawback of these high concentrations is the intense cramp following the injection and lasting two or three minutes.

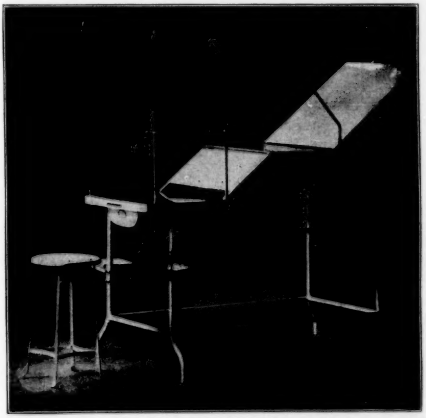


Fig. 2.—Table for injections of varicose veins, arranged for the injection in the recumbent position. The passage from the first position to the second position is effected rapidly by turning of wheel located at right end of table.

If sodium salicylate has failed to produce a sufficient reaction, red mercuric iodide should be tried, as it does not give rise to any cramp. We use quinine in cases in which we desire a prompt result: six or eight injections may be made on the same day. As a rule every injection point gives rise to the sclerosis of a section from 10 to 20 cm. long, and it will be necessary to repeat the injections so as to obtain the total obliteration of the superficial network of veins.

The treatment may be administered either by making injections two or three times a week at the rate of two or three injections each time (this is the method we recommend with the sodium salicylate and in this case the patient is not confined to bed), or by making a larger number of injections, say six or eight injections at a time, as it is possible to do when quinine is used, but the intensity of the reaction with this drug may sometimes though not always necessitate a momentary rest. On the other hand, we have been able to treat many

3. Two fatal cases have been reported (Lomholt, Sven: Fatality Through Embolus in the Pulmonary Artery after Treatment of Varices with Concentrated Solution of Sodium Chloride, Ugesk. f. Læger, **89**: 13 [Jan. 20] 1927. Olson, O. A.: Fatality Following Varicose Vein Injections, J. A. M. A. **89**: 692 [Aug. 27] 1927) following the use of sodium chloride or dextrose solution. None have been reported with the solutions that we advocate.

4. Sicard, J. A., and Gaugier, L.: Treatment of the Varices by the Sclerosing Method, Paris, Masson & Cie, 1927.

hospital patients performing hard physical work without interruption of their occupation and without the menace of any accident.

### EVOLUTION OF THE VARICES AFTER THE INJECTIONS

Immediately after the injection of sodium saylicylate a cramp frequently appears, not only at the point of the injection but all along the limb; the cramp, of variable intensity, lasts from one to several minutes and then disappears entirely. At that time there may be noticed a local constriction of the injected vessel and a horripilation of the skin that covers it.

As a rule, two days elapse before the actual phenomena appear at the level of the vein; at the end of this period the vein becomes slighuly painful and sensitive to pressure, and starts on its sclerosing reaction.

There may be three degrees to this reaction:

1. Simple parietal sclerosis, in which the slightly painful vein walls merely thicken without obliteration of the vessel.

2. Sclerosis with obliteration, in which the vein becomes hard and loses its lumen after a few days, turning into a solid cord.

3. Obliterating sclerosis with perivenitis. In this case the inflammatory reaction has reached the three coats of the vessel; the solid cord is pink, swollen and painful, and moist applications, whether hot or cold, may be required to relieve this transitory inflammation.

### MECHANISM OF THE ACTION OF OBLITERATING INJECTIONS

To ascertain how the liquid injected into the venous system of the leg is distributed, certain investigators have resorted to radioscopy and radiography. Jentzer of Geneva has carried out this investigation by means of a 20 per cent strontium bromide solution, and has shown that in varicose veins the injected liquid follows a course opposite to the ordinary flow of the blood, which, in his opinion, explains the absence of embolism.

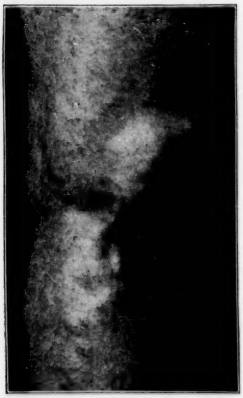


Fig. 3.—Typical varicose veins of the popliteal fossa: before the injections, in May, 1925.

Jointly with Sicard and Gaugier,[4] I have injected iodized oil into varicose veins under the fluoroscopic screen; we have found that the flow, if not reversed, was at least much slower, and that the liquid injected into the superficial network of veins did not show any tendency to reach down to the deep-seated network, when the injection had been made on a recumbent patient, the leg being at rest in its usual posture. But as soon as the patient is asked to perform active muscular movements of the calf of the leg, it is possible, by means of iodized oil, to see suction take place from the surface toward the deep veins, and the opaque liquid injected into the superficial network penetrating into the deep lying veins.

The practical inference from this experiment is that the caustic liquid must be injected while the limb is at rest and that the limb must be left during a certain time in an extended position in order that the sclerosing action may be limited to the surface, as desired, without extending into the deep system of veins.

### PATHOLOGIC CHANGES IN THE VEINS SUBMITTED TO THE INJECTIONS

From the very onset of my researches with Sicard I [5] investigated on parts obtained surgically or from animals the mechanism of the obliteration of the veins after the injection of caustic liquid. It is first of all to be pointed out that, contrary to the opinion held heretofore, the liquids injected do not have any coagulating action on the blood; this is easily ascertained in a test tube.

Fig. 4. — Typical varicose veins of the popliteal fossa in same patient as in figure 3 after four intravenous injections of sodium salicylate. Result twenty-two months after the treatment, in March, 1927 (Sicard and Gaugier).

The anatomic alteration brought about from the caustic injection is first an irritation of the endothelium with congestion and proliferation.

The fibrin of the blood is deposited on the walls of the injected vessel, adhering to the entire surface of the injured endothelium. This highly adhesive fibrin coating is not constant. In the third stage, sclerosis sets in gradually and atrophy of the entire vessel takes place.

Jentzer and Askanazy, having mixed collargol in suspension with a solution of sodium salicylate and having injected this mixture into the veins, have noticed that a few hours after the injection the collargol had penetrated into all the coats of the vein and even beyond, having brought about a general inflammation of the vein. Meisen has noted the same histologic alterations: viz., edema and hemorrhage into the adventitious area.

All these anatomic observations show that the process of chemical irritation of the vein that Sicard and I have named "venitis" is substantially different from the process of infectious irritation of the vein called phlebitis. Venitis is localized, generates a very adhesive clot, does not give rise either to pain or to general edema of the limb, and leaves an atrophied cord. In phlebitis there is frequently an extension from the superficial network to the deep lying network causing edema of the limb; the clot is often loose and afloat in the blood; there is pain; atrophy does not take place; the vein remains hard and bulky, and further attacks of infections are possible. Phlebitis may give rise to embolism; venitis has positively no tendency to do so.

### ACCIDENTS FROM THE INJECTIONS

The medical treatment of varices by means of obliterating injections is generally very well tolerated; we have never noticed any serious accident but merely

5. Forestier, Jacques: The Treatment of Varices by Intravaricose Injections, Clinique, Paris **19**: 274-276 (Nov.) 1924.

V 90
1928

slight troubles that may be classed as local and general troubles.

1. Among local troubles is first the excessive intensity of the chemical reaction; that is to say, the third degree reaction which has already been described: perivenitis and pain with edema and heat. It is mere trouble, for although the patient suffers momentary pain, to relieve which hot applications, fomentations and occasionally a little acetylsalicylic acid are necessary, these transitory phenomena last hardly four or eight days, and further the cure.

If an important quantity of liquid has oozed out of the vein at the time of the injection, there may arise either an inflammatory painful spot or, if the inflammation is greater, a small slough about 10 mm. in diameter or larger. This unpleasant trouble, which was experienced in the past before sodium salicylate was used, has practically disappeared; and in our experience we have never seen a case of slough since we have given up the use of sodium carbonate.

In case of the oozing out of a small quantity of liquid, it is recommended: (*a*) that from 5 to 10 cc. of physiologic sodium chloride solution be injected to dilute the concentration of the caustic substance in the tissues; (*b*) that the zone where the infiltration has taken place be massaged for five or ten minutes to dispense the caustic substance over a larger surface.

It happens at times that the obliterated cord, instead of undergoing a resorption, remains hardened and sensitive during several months; this happens especially with red mercuric iodide but this condition disappears in time.

Local pigmentation along the course of the obliterated vessel, which is the sign of an irritation of the sympathetic nerves generated by the treatment, may persist during several months in certain subjects; it is not a trouble—it is hardly not more than a slight inconvenience.

2. Among general troubles, reference may be made to syncope at the time of the injection, most frequently solely of an emotional nature, which takes place at the time of the first injection. To attenuate this, it is recommended that a small dose be used the first time, or, if necessary, that merely a small quantity of physiologic sodium chloride solution be injected.

In the great majority of cases, intravaricose injections do not entail any humoral shock. Delater has recorded a few very slight ones which have never had any permanent consequences.

After the injections of red mercuric iodide there may be noticed accidents of mercurial intolerance; attacks of colitis with diarrhea and hemorrhage, and at times a slight indisposition for several days. It may happen that after a quinine treatment carried out quickly a general weariness is felt for one or two weeks.

As to the accident of pulmonary embolism consequent on the thrombosis of the vessels, as far as I am concerned I have never noticed it. Thousands and possibly hundreds of thousands of injections have been made in France without any fatal accident traceable to embolism having been recorded. In Germany and in the United States two deaths have been recorded following injections of concentrated solutions of sodium chloride or dextrose in patients in a very impaired state of health.

### INDICATIONS FOR TREATMENT

The treatment of varices through obliterating injections is recommended in cases of true varices of the lower limbs, those accompanied by valvular insufficiency (fig. 3). The origin of these varices is undoubtedly a varied one; for instance, there is a varicose diathesis, a state of fragility of the walls of the veins that makes them liable to expansion at places where they are submitted to pressure.

Among the indications for this treatment are also relapses of varices after the operation of saphenectomy. I have had the opportunity of treating several such cases by injections. Likewise, treatment is indicated in varices of the legs complicated by ulcers. Whenever ulcers are accompanied by dilated veins, the best results are secured by intravaricose injections.

### CONTRAINDICATIONS

The contraindications arise first of all in the general condition of the patient. Old persons with enfeebled health should not be given injections. A previous medical examination is necessary, particularly as to the condition of the heart, the function of the kidneys (albuminuria) and the possibility of diabetes.

Fig. 5.—Venous and lymphatic disturbances of the lower limbs, a condition of chronic edema, but often called deep-seated varicose veins. This is a contraindication to intravenous injections.

The treatment should not be administered in cases of varices accompanied by extensive edema of the lower limbs; in such cases the superficial varices are accompanied by deep circulation troubles, and the obliteration of the superficial network will in no way improve the circulation (fig. 5).

The treatment should not be administered to patients who have suffered recently from varicose phlebitis. There exists in the dilated sections a latent microbic activity which may be rekindled by the chemical injections. We had such an example at the outset of our researches.

Undoubtedly contributory causes are at play in bringing about this condition, particularly the standing posture and strains, while walking helps in keeping up a well regulated venous circulation. We are wont to say that cooks and laundresses constitute a large portion of the family of varicose persons, while mail carriers are practically free from this disease.

The influence of the insufficiency of endocrine glands in the etiology of varices appears proved beyond doubt. In the course of their researches the attention of Sicard and Gaugier [4] has been attracted to the insufficiency of the pituitary body. It happens frequently that in patients showing signs of acromegaly the venous system

is dilated. This is the reason why we are accustomed to combine pituitary with local treatment.

The superficial varices of the lower limbs, whether truncular, straight or sinuous, constitute the characteristic condition in which this treatment is indicated.

As to troubles caused by the so-called clinical syndrome of internal varices which nobody has ever seen alone, I believe these are nothing but mere functional disturbances in the blood vessels of the lower limbs. The clinical aspects are entirely different from those of varices.

Varices accompanying pregnancy should not be treated by this process; these are due not, as it was first assumed, to the compression of the pelvic veins through the dilated uterus, but to transitory troubles of the endocrine glands which disappear after delivery. These cases should not be treated by injections, unless the varices persist a certain time after delivery.

Fig. 6.—Supplementary venous dilatations of the lower part of the abdominal wall and left groin, consecutive to deep phlebitis of the iliac veins. Such dilatations should be respected as a contraindication to intravenous injections.

It is advisable in patients with varicose veins who complain of pains in the lower limbs to examine carefully the joints, bones, muscles and arterial circulation. Frequently varices are accompanied by arthritis of the foot or of the knee, by flatfoot or by deep seated arteritis on which this treatment would not have any effect.

Furthermore, the treatment should not be administered in collateral varices, consisting of large dilatations located mostly at the root of the limbs but at times at the level of the abdomen or of the breast, and originating from the obliteration of the deep venous networks (fig. 6). Unlike the manner of the flow in ordinary varices, the blood stream in these collateral varices flows from the distal segment to the proximal and is comparatively rapid; they should not be interfered with, and in such cases a history of a former deep seated phlebitis, whether femoral, pelvic or of other sources, is a very valuable point in the diagnosis.

### GENERAL RESULTS OF THE TREATMENT

The treatment of varices by obliterating injections gives the most favorable results in the vast majority of cases; the curing of even very pronounced cases is effected within three or five weeks by means of harmless and only slightly painful reactions; the method does not confine the patient to bed. In most cases the varices converted into hard cord are permanently obliterated (fig. 4). This method, therefore, appears bound to take the lead over the surgical treatment with its risks and dangers.

In 15 per cent of the cases, recurrences are noticed, not on the obliterated varices but on varicose sections appearing after the injections. As we know that the varicose condition is a diathesis, we are not surprised by such recurrences. In such cases a few supplementary injections after one or two years are likely again to bring out favorable results.

Not only does the treatment of varices by obliterating injections cause the ugly projections to disappear (an esthetic consideration which carries great weight with many young women), but it also does away with functional troubles, and with the sensation of heaviness and heat particularly painful in the summer months.

Because of its simplicity and harmlessness, the treatment of varices by obliterating injections is bound to take prominent rank among the medical therapeutics of this condition.

### CONCLUSIONS

1. Intravenous injections of properly chosen caustic solutions into the varicose veins produce a chemical reaction (venitis) which leads to obliteration and secondary atrophy of the superficial vessels.

2. The obliteration of the varix takes place with little pain, tends to the disappearance of the distended vessel, and at the same time relieves the functional disturbances produced by the varices.

3. The best solutions to be employed are sodium salicylate, quinine and red mercuric iodide.

4. I have not observed an embolus or any other accident of importance in a total of more than 5,000 injections.

5. The treatment is an ambulatory one. It is indicated only in varices of the lower limbs with valvular insufficiency of the veins and with or without sloughs.

Boulevard des Anglais.

---

## A METHOD OF CARRYING OUT TWO-STAGE OPERATIONS FOR CARCINOMA OF THE STOMACH

DONALD C. BALFOUR, M.D.
ROCHESTER, MINN.

Resection of the stomach in cases of carcinoma offers the patient the only chance for cure. It follows, therefore, that this operation will be performed in advanced

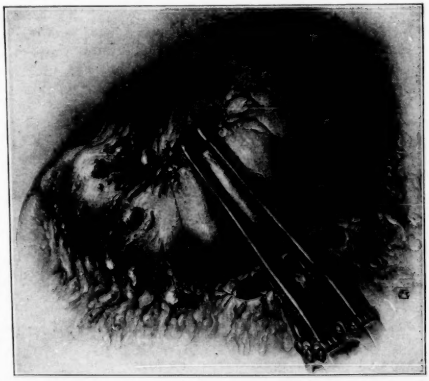


Fig. 1.—First step in two-stage operation for carcinoma of the stomach. The line indicates the upper limit of the carcinoma.

stages of the disease until some better method of treatment is found. Usually if resection is indicated it can be carried out as a primary operation, with as much safety as if done in stages. Such safety is chiefly due to the preparation of the patient for operation by (1) the control of obstruction and its effects, (2) gastric lavage, (3) intravenous administration of fluids

and nourishment, and (4) transfusions when necessary. Occasionally, however, a fixed mass is encountered in the pyloric end of the stomach, which has extended into the regional lymph nodes and is fixed to the pancreas, possibly actually involving it; the duodenum is inflamed and thick walled, and the patient is in poor condition because of prolonged starvation resulting

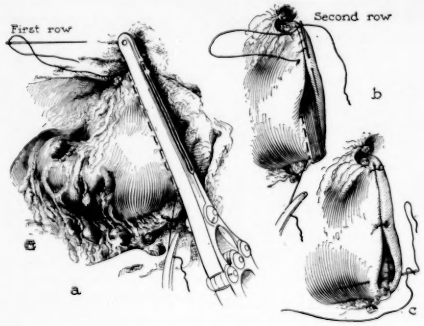



Fig. 2.—Closure of the end of the pyloric segment.

from obstruction. In such cases a two-stage operation unquestionably has many advantages over a one-stage operation.

It has been customary in these cases to perform either posterior or anterior gastro-enterostomy far enough above the growth so that resection can be done in from ten days to two weeks without encroaching on the gastro-enteric stoma. One of the difficulties in this procedure is that the stoma is necessarily made so high on the stomach that it may not satisfactorily accomplish what is intended, that is, good drainage, and the patient's condition does not improve sufficiently to warrant the resection. Another objection is that if the stoma is placed at the most dependent part of the stomach where it will function well it may be difficult to resect the involved portion of the stomach without encroaching on the anastomosis or actually tearing into that area. The latter accident has occurred in my experience on more than one occasion, and although the tears were closed and the patients recovered, nevertheless technical difficulties were added to the risk of operation.

Because of the foregoing troublesome experience with gastro-enterostomy it occurred to me that these difficulties might be avoided by dividing the stomach completely above the growth, closing the end of the lower segment, and reestablishing gastro-intestinal continuity either by a retrocolic end-to-side gastrojejunostomy or an antecolic end-to-side gastrojejunostomy with entero-anastomosis.[1] The advantages of such a procedure are obvious. First, the operation can be done under local anesthesia; it takes but little more time than gastro-enterostomy. Second, perfect drainage of the stomach is established immediately, and the patient can take adequate nourishment without difficulty. Third, the second stage is usually simple, since the pyloric segment is free and can be mobilized quickly and easily. Furthermore, complete exclusion of the pyloric segment for a period of from ten to fourteen days will have lessened the activity of any inflammatory process to an astonishing degree, and growths which at the first operation appeared questionably removable may now be resected with ease. Finally, there is no interruption in the feeding of the patient, since there is nothing to be done with the upper segment of the stomach at the second stage. All in all, I have found the method so satisfactory that I believe it is worthy of description.

The abdomen is opened under local anesthesia in the median line between the ensiform cartilage and the umbilicus. Careful search is made for distant metastasis; then the carcinoma and the extragastric extension are investigated. If the growth is fixed posteriorly it is important to determine whether the extension downward in the omental attachments along the superior and inferior borders of the duodenum has passed beyond the bounds of curability. It is not always easy to determine this and I believe one is more likely to err in deciding that the disease has progressed beyond such bounds than that it has not. It is always important to keep in mind that there are enlarged lymph nodes in such cases and that they are as likely to be benign as malignant. If it is found that the duodenum can be mobilized and safely closed and that a two-stage operation is probably preferable, the stomach is divided above the growth.

The upper limits of the carcinoma are first identified and with the fingers introduced into the lesser peritoneal cavity through the gastrohepatic omentum any posterior adhesions that may be present are stripped. The gastrocolic and gastrohepatic omentum are then divided

Fig. 3.—Arrangement of structures at completion of the first stage of the operation.

and the stumps ligated, both curvatures being freed for a distance of about 5 cm. and far enough above the growth so that the end of the lower segment can be closed easily. Two Payr clamps are placed across the stomach, the stomach is divided between them and the end of the pyloric segment is closed by a continuous

1. The principle of this operation is that described by Devine (Surg. Gynec. Obst. **40**: 1-16 [Jan.] 1925) for certain types of duodenal ulcer.

mattress suture of heavy chromic catgut below the clamp, the clamp then being removed, and the chromic catgut continued as a second row with interrupted silk reinforcing sutures if it appears necessary (figs. 1 and 2). Gastro-intestinal continuity is then reestablished

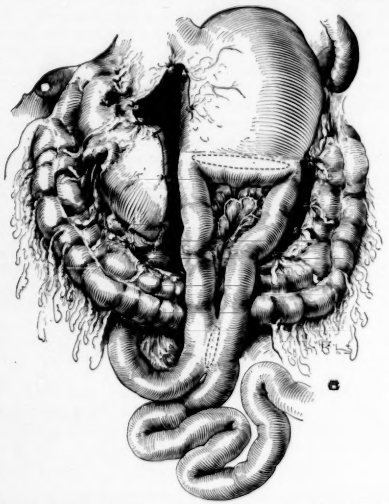


Fig. 4.—Arrangement of parts following anterior end-to-side gastrojejunostomy with entero-anastomosis (first stage of operation).

by a posterior (fig. 3) or anterior (fig. 4) end-to-side gastrojejunostomy; if the latter, an entero-anastomosis is added.

Following this first stage the patient is given at least 2,000 cc. of sodium chloride solution every twenty-four hours by proctoclysis. The stomach is lavaged the first evening, again the following day and again after twelve

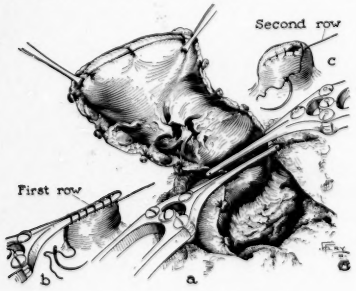



Fig. 5.—Excision of pyloric segment.

hours if there is tendency to retention. Otherwise, on the morning of the third day fluids are given by mouth and the quantity is increased until an adequate amount is being taken by the fifth day. A soft diet is gradually instituted and unless unfavorable symptoms develop, for example, pulmonary complications, the second operation is carried out after from ten to fourteen days.

At the second operation the original incision is reopened, and any retained secretions are swabbed out with iodine. The end of the pyloric stump is mobilized and the gastrocolic and gastrohepatic omentum divided so as to include all regional lymphatics in the removal. Posterior attachments are divided and, if the pancreas appears to be involved in the carcinomatous infiltration, the dissection should be done with the cautery knife. The dissection is continued with the removal of extragastric and duodenal tissue until a satisfactory part of the duodenum has been prepared for division. A small Payr clamp is then placed on the duodenum and the segment removed (figs. 4 and 5). The duodenal stump is closed with chromic catgut adequately reinforced and the stump protected by surrounding omental tags. The field of operation is carefully flushed out with sodium chloride solution and the abdominal incision closed with through-and-through sutures of silkworm-gut.

The results of this method of two stage operation for certain carcinomas in the pyloric end of the stomach have been so satisfactory that I have no hesitation in commending it.

---

# THE BARRACUDA (SPHYRAENA) DANGEROUS TO MAN

E. W. GUDGER, PH.D.
Associate in Ichthyology, American Museum of Natural History
AND
C. M. BREDER, JR.
Research Associate, New York Aquarium
NEW YORK

The barracuda is a large, savage, superficially pike-like fish of tropical and subtropical seas. Because of its considerable size and voracious habits, it has long been accused of attacking men bathing or accidentally falling into the water. For this reason it has been of much interest to physicians as well as ichthyologists. A definite case of this habit having come directly to the attention of one of us, and the literature having been thoroughly worked up by the other, we have thought that it would be of interest and value if these data were brought together and presented in definite form to medical men and to others who might be interested.

## REPORT OF ATTACK ON MAN NEAR COLON BY SPHYRAENA BARRACUDA

While Breder was confined in the United States Naval Hospital at Colon in 1924, with fever contracted while carrying on zoological explorations in the Darien jungle, there was brought to his attention the curious and interesting surgical case here described—that of a man, aged about 23, suffering from severe lacerations of the right leg, received while swimming in the Caribbean Sea. The facts as related by the victim are as follows:

This man, Anthony Sjalkiewicz, a carpenter's mate, third class, U. S. Navy, went in bathing with several companions off the Coco Solo naval base on the Atlantic side of the Isthmus of Panama. Presently in some way he found himself separated from the others and swimming alone. He then turned and made his way leisurely toward the shore where the others had already landed. When about 50 yards away, he suddenly felt something grasping his flexed right leg in the knee region, while at the same time there was considerable splashing as if some large fish or other animal were in

the water alongside him. He felt no pain at the time, but within two or three minutes he realized that he was badly hurt. As soon as he felt the bite, he began to splash violently with his other leg and with both arms, calling for help all the time. Before those on shore had fully realized what had happened and could get to him, he had by extreme effort made his way to shore. As soon as it was seen that he was badly wounded, he was at once taken to the Colon Hospital. Here he was anesthetized, the wounds were washed, drains were

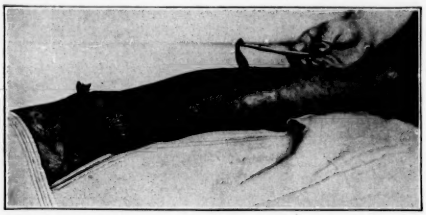


Fig. 1.—Back of leg, showing the two great gashes, one above, the other below the knee. A surgeon is holding one of the drains to indicate the end of the lower gash, which extends half around the leg. Photograph by courtesy of Captain Bronson.

inserted, and the lacerations were stitched together. This all occurred on the afternoon of June 6, 1924.

Great interest was aroused in this case, the prime question being as to the identity of the animal that caused the wounds. Breder, being a zoologist, and at the time a convalescent patient in the hospital, was fortunately at hand to attempt an answer. Dr. Leary, the superintendent of the hospital, kindly allowed him to be placed in a wheel chair and carried to see the injured man while his wounds were being dressed, so that he might try to identify the animal that had made them. The account that follows is from Breder's notes made at the time. It is illustrated by photographs of the wounds, made by order of Captain Bronson of the Coco Solo naval base. These are now a part of the United States Navy records. For copies of them we are indebted to the courtesy of Captain Bronson.

Figure 1 is a photograph of the back of the leg showing the two great gashes, one above and one below the knee. A surgeon is holding one of the drains to show the lower end of the lower gash, which extends half round the lower part of the leg. Figure 2 is a front view of the leg. Attention is called particularly to the transverse gash across the leg above the knee, and the end of the gash in the calf, which extends in front to about the sharp edge of the shin bone. With the limb straightened, the two gashes are widely separated. It will make the matter clearer if these wounds are separately described.

The transverse cut across the leg above the knee looks in the photographs as if it might be deep but it is really shallow, as may be judged from the absence of stitches and drains. It begins somewhat inside the median line of the leg in front and extends round the outside of the leg nearly to the median line on the back side. Just below this cut is another which begins almost on the front median line and extends round the inside of the leg almost to the median line on the back. These two cuts practically encircle the leg, though not at the same level.

The third cut is below the knee in the calf. It begins on the anterior median line slightly below the bulge of the calf and extends round the leg about half way toward the posterior median line of the leg, where it turns diagonally upward, terminating at a point slightly below and behind the bend of the knee. This change of direction is believed to be due to an involuntary kick on the part of the swimmer, causing the teeth of his attacker to cut thus by reason of the change of angle between the jaws and the axis of the lower limb. The fact that there is no corresponding cut on the inside and back of the calf indicates that the attacker was rotated to the right in relation to the right side of the man, as will be shown later. This is confirmed by the fact that the inside cut above the knee and the outside cut below the knee are deeper. In fact, there is no inside cut below the knee where the leg is of smaller diameter.

These are the facts with regard to the wounds. As to the agent by which the wounds were made, three possible animals at once presented themselves for consideration—a shark, a crocodile and a barracuda—and each was considered in detail. The great reach of the wound suggested a shark, but the fact that the three cuts were long and fairly straight incisions forced an early abandonment of this view. It is inconceivable that any shark could have given such a slicing cut as that through the calf of the leg without leaving some marks of its closely placed teeth on the other side of the leg. Further, if the wound were the result of a simple straight bite with no shearing action, it would have conformed to the curved shape of the shark's jaws. Gudger has confirmed this conclusion of Breder's by examinations of figures of shark bites, made from photographs.

Further, the appearance of the wounds, coupled with the attending surgeon's description of the condition of the freshly cut flesh, indicated that it was a sheared cut and not a simple bite by pressure. Then, too, the man stated that the bite was made while the limb was flexed, and that the attack was made from the side of the leg. This flexing brings the two wounds in close proximity. Striking from the side, a relatively narrow-muzzled animal could close down its jaws so as to inflict these injuries. If the animal were rotated slightly to the

Fig. 2.—Front of leg, showing the comparatively minor wound above the knee, and below the knee the end of the lower wound. Photograph by courtesy of Captain Bronson.

right with reference to the knee it would cause one side of the lower jaw to sink in deeper than the other, and the opposite side of the upper jaw to bite deeper than its mate below.

This is apparently just what happened, for the cut in the calf below the knee is much deeper than the one above on the back of the leg, while on the front there is a bad cut above the knee and none at all below. Furthermore, the sides of the two jaws above the knee

must have held better than those below, as would be expected, since both upper and lower engaged in the flesh where the diameter of the leg was greater, while the teeth of the lower jaw only plowed through the flesh as the leg was straightened or as the animal moved before it relinquished its hold.

In this view of the wounds, it does not seem that the bite could have been made by the wide crescent-shaped jaws of a shark. However, since a crocodile has comparatively narrow jaws, this beast was next considered. But it is clear that the jaws of a crocodile large enough to attack a man would have been in width nearly double those of the animal that made the wounds under consideration. Further, since crocodiles have bluntly conical teeth, it is clearly impossible for such teeth to have made such clean-cut wounds as are shown in the illustrations. Even if these teeth could have been forced into the flesh, the resulting wounds would have been jagged and irregular, more bruises than clear-cut incisions.

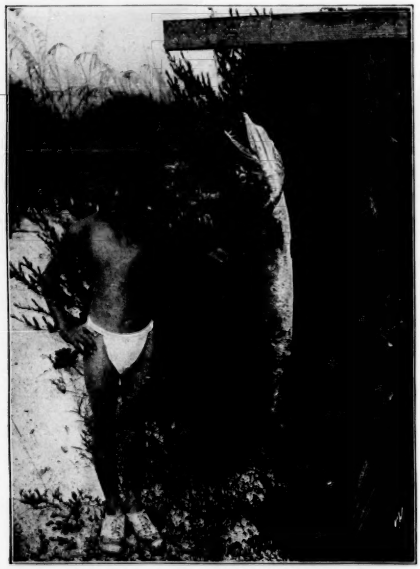


Fig. 3.—Sphyraena barracuda (Walbaum) and an 11 year old boy, showing relative size of fish. Photograph by A. G. Mayor.

By a process of exclusion we have now come to a consideration of the barracuda, the large species of which, *Sphyraena barracuda*, abounds in these waters. This is a huge pike-like fish which throughout the West Indies and the whole Caribbean-Gulf region generally is much more dangerous and more feared than the ordinary sharks or the crocodile, rather rare in salt water, since it is both utterly fearless and extremely voracious.

Figure 3 shows a specimen with a well grown 11-year-old boy standing by. This will give a good idea of the ordinary size of the fish. The head of a 55-inch specimen (weight, 38 pounds) is shown in figure 4. Both these photographs are of specimens taken by Gudger at Tortugas, Fla., at the Marine Biological Laboratory of the Carnegie Institution of Washington. They faithfully portray the fish as a whole and its tremendous jaw structures. As may be seen, the jaws are long and narrow but capable of a wide gape. Both these jaws are filled with long, compressed, pointed, lancet-like teeth, sharp on both edges. These are largest in front and decrease in size backward. They are set palisade-fashion in each jaw, those on the upper jaw in two series, those below in one. In the upper jaw the outer and smaller set is implanted in the premaxillaries, while farther in and separated from the smaller teeth by a deep groove are the huge fangs set in the palatine bones. When the lower jaw is closed, its lancet-like teeth fit in sausage-mill fashion between the two upper series.

With the man's leg held between such jaws armed with teeth equally sharp on the front and back edges, with the man surging forward and the fish pulling backward until the limb got free, one would expect to find just such wounds as are portrayed in the illustrations. Therefore we do not hesitate to attribute this man's misfortune to the voracity of a huge member of this species of barracuda.

Figure 5 was drawn from a sketch by Breder to illustrate our conception of how the attack was made. It must, of course, be understood that this drawing is entirely diagrammatic. Here, with the fish swerving to the right and the man kicking out with his leg, there would result just such wounds as have been described.

In the case under consideration, the femoral artery was fortunately not severed. Had it been, there would likely have been a repetition of the sad case of the young woman similarly attacked with fatal results off St. Petersburg, Fla., some years ago—a case widely heralded in the daily press and hence well remembered by many who do not usually hear of such matters.

### OTHER ATTACKS BY BARRACUDAS

In an extensive article on this fish by Gudger[1] is a section entitled "The Barracuda Dangerous to Man," in which will be found all the data then available (1918) as to the danger to man from the attacks of this voracious fish. These data will be given here in abbreviated form. For full accounts and for citations to author, book and page, the interested reader is referred to the monograph itself.

Both of us can certify to the fact that in southern Florida, around Panama, and throughout the West Indies in general the barracuda is much more feared than the average shark. The common shark is an arrant coward, and if a person falls overboard near one it will probably at once depart in a panic. To prove this a Key West fisherman once offered to jump overboard on one, and, had Gudger not wanted that particular shark for dissection, the fisherman would have been permitted to demonstrate—so fully was he persuaded that the man was right. On the other hand, however, the big barracuda is a fish inquisitive, utterly fearless, voracious of appetite, and seemingly implacable of temper. However, it must not be imagined that barracudas necessarily or actually attack all persons in the water. They will often swim up to bathers, look at them, and then go off without molesting them. Thus, a member of the Bingham Oceanographic Expedition in 1925,

1. Gudger, E. W.: Sphyraena Barracuda: Its Morphology, Habits and History, Pub. 252, Papers Department Marine Biology, Carnegie Institution of Washington **12**: 53-108, 1918.

V 90
1928

when off the coast of British Honduras, had such an experience. Warned by the shouts of those at the rail, he swam to the ship's ladder and climbed up it in time to see a barracuda calmly watching his point of egress. Mr. William Beebe, leader of an expedition for the New York Zoological Society to the coast of Haiti in 1927, made a great many descents on to the coral reefs while wearing a diving helmet. On a number of these descents, barracudas came close to and inspected him without making any attacks, being probably deterred

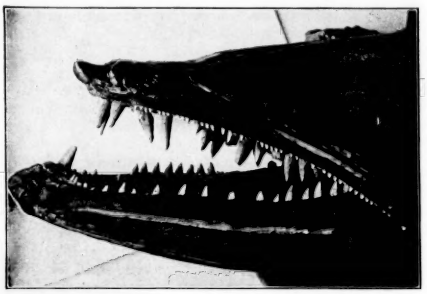


Fig. 4.—Mouth and jaws (dried) of a 55-inch barracuda. Note that there are two sets of teeth above and only one below. Photograph by E. W. Gudger.

by the stream of bubbles escaping from under the helmet. Another member of the expedition, when down one day with a motion picture camera fitted in a water tight box, made a remarkable film showing a barracuda emerging from the surrounding haze and coming head on close enough nearly to fill the film. It stopped for a moment very close to the man and camera, and turning to one side came to rest while the camera was trained on it to get a beautiful broadside view. Then the fish leisurely pursued its course, disappearing in the distance, without at any time showing any signs of hurry, fear or animosity. In fact, the whole performance as seen in the motion picture was one of evident composure, despite the unusual appearance of the diver in his helmet, with air tube and life line, and carrying a camera.

That this, however, is not the only and indeed probably not the usual behavior of the big barracuda is attested by a large number of writers on the natural history of the West Indies. This was admirably put 260 years ago by the first writer on the fishes of the Caribbean-Gulf region. The Sieur de Rochefort wrote in 1665 in his "Histoire naturelle des Isles Antilles" that:

> Among the monsters greedy and desirous of human flesh, which are found on the coasts of these islands, the Becune [the big barracuda] is one of the most formidable. It is a fish which has the figure of a pike and which grows to 6 or 8 feet in length and has a girth in proportion. When it has perceived its prey, it launches itself in fury, like a bloodthirsty dog, at the men whom it has perceived in the water. Furthermore, it is able to carry away a part of that which it has been able to catch, and its . . . bite becomes mortal if one does not have recourse at that very instant to some powerful remedy.

This is confirmed by Rochefort's contemporary Du Tertre, who in 1667 published a work bearing a title almost identical with his. This other natural historian of the Antilles in writing of the big barracuda says:

> This fish is greedy, bloodthirsty, bold, and more dangerous than the Requien [shark] . . . because, besides the fact that it can bite more easily, it is not startled by any noise any more than by the movements which may be made in the water. On the other hand, in order to investigate these, it launches itself at the persons [making these movements] in order to devour them.

William Dampier in his "Two Voyages to Campeachy" (1699) contents himself with saying of "Parricootas" that "They are a floating Fish and greedily take the Hook, and will snap at Men in the Water." But Sir Hans Sloane in his "Voyage to . . . Jamaica" (1707) gives a new slant to the subject by saying among other things about the barracuda that "it is very voracious, and feeds on Blacks, Dogs, and Horses rather than on White men when they can come at them in the water," while Catesby in his "Natural History of the . . . Bahama Islands" (1731) merely says on this point that "some [barracudas] of the largest size have frequently attacked and devoured men as they were washing in the sea."

Now let us return to the idea, first advanced by Hans Sloane, that the barracuda is discriminating in its taste and choice. To Père Labat,[2] another early describer of the West Indies, and one with a keen eye (and ear) for natural history matters, we owe some interesting facts and even more interesting conjectures. Of the matter in question he writes:

> As the barracuda is not obliged to turn on its side like the shark when it wishes to bite, it is infinitely more dangerous. Our savages, who attack and kill Requiens [pointed-nose sharks] and Pantoufliers [hammerhead sharks] with knives, do not dare run that risk with Becunes, because, moving with such extraordinary speed, they carry away an arm, a leg, or a head as if it had been cut off with a blow of a saber. It happened several times that horses and other animals crossing [the river] by swimming have had their legs cut off or half their bellies carried away.

Fig. 5.—Diagrammatic drawing to show how the barracuda caught and bit the sailor's leg. Sketch by C. M. Breder, Jr.

2. Labat, J. B.: Noveau voyage aux Isles de l'Amerique, contenant l'historie naturelle de ces pais, Paris, 1742.

Furthermore, Labat reports it as a "veritable fact" that when a boat is overturned both sharks and barracudas will attack first dogs or horses, secondly negroes, and lastly white men struggling in the water. His explanation reads thus:

> My notion is that the bodies of dogs and horses give off "corpuscles" which strike [the olfactory organs of] the fishes more strongly and attract them longer. Just as we see that wolves, crows and even dogs more often come to carrion or to a body in which corruption has begun, rather than to a body which has just died. To my mind not only are "corpuscles" exhaled by them in larger quantities but also they extend farther and strike more strongly on the organs of these animals.

This recalls and confirms the theory advanced by Sloane. But Father Labat, however, extends his line of thought further when he goes on to state:

> But a thing rather surprising, yet one which is, however, of public notoriety, is that these same Becunes more often attack an Englishman than a Frenchman, when they find both together in the water. It may be that the Englishman has pores more open than the Frenchman, and as a necessary consequence he will exhale more "corpuscles" proper to strike the organs of these fishes and hence attract them.

Labat then goes on to conjecture that there is a difference in the "corpuscles" given off by the members of the two nations because of a difference in their foods and in their physical habit of body. He suggests that the Englishman, being a hearty eater of meats and of a stout rugged body ("beefy") in marked contrast to the daintier feeding and smaller (slenderer) bodied Frenchman, will produce a stronger exhalation which will extend farther and be more perceptible to the fishes. This argument Labat backs up by quoting the cannibal Caribs to the effect that the flesh of an Englishman is stronger and more appetizing than that of a Frenchman. Furthermore, he affirms that Carib trackers can more easily follow an Englishman through the jungle by smelling his tracks, and by the odor can distinguish the nationality of the track-maker. He argues that, if this is true of men, it should also hold true for fishes.

At first thought one hardly knows what to make of this, since it depends wholly on the question of the strength of smell in fishes. This, in sharks, is known to be acute. One of us in fishing for sharks has repeatedly shown that, by pouring blood into the water or by hanging overboard a bag of decomposing fish, sharks may be readily enticed up tide. One was once seen "quartering" a blood stained current like a bird dog following a running covey of quail. G. H. Parker in 1914 experimentally demonstrated the effectiveness of the olfactory apparatus in dog-sharks. Furthermore, it is well known that the odor of the negro is very offensive to the white man, while that of the white man is equally offensive to men of other races (i. e., the Chinese).

The matter seems rather plausible at first, but further study tends to discredit the idea advanced by Labat. Sharks, being mainly scavengers, do find their prey largely by the sense of smell (speaking broadly of this perception of odoriferous bodies in the water). For this they are well provided in the structure of the large olfactory lobes of their brains, which send large nerves out to the well developed olfactory cups. Moreover, sharks attack again and again, tearing their prey into "chunks" small enough to be swallowed. On the other hand, no such developed olfactory organs are to be found in the barracuda. In this fish, moreover, both optic lobes and eyes are much better developed relatively than in the shark. Attracted by any commotion or particularly by any flashing body in the water, the barracuda lunges forward, strikes at the object, and passes on. This is our observation, and it is corroborated by Mowbray,[3] who has had wide experience with this fish. He thinks, as we do, that the barracuda does not desire human flesh but is attracted by moving objects in the water, particularly if these objects make flashes. These it will strike at without much discrimination, but in the case of a human being it will likely turn loose and pass on. There is no record known to us of a barracuda attacking a person a second time after once laying hold.

Of later day accounts of barracudas attacking men, there is no dearth. Of these only five will be noticed—two from Florida, and the others from other regions to show that everywhere throughout the world where it occurs, this predatory fish is feared.

Charles Frederick Holder, the naturalist and sea-angler, relates[4] that he knew a fisherman on the Florida Reef called "Barracuda," not as was to be supposed from his phenomenal success in capturing this fish, but because once, in swimming out to a wreck with a life-line, he was attacked by a barracuda and terribly wounded. Holder knew of another man who, when he went down into the "well" of a fishing boat to make some repairs, was attacked by a savage barracuda, which had been caught and placed therein, and maimed for life.

Nor are such accounts confined to the West Indies in the Atlantic Ocean. Brenchley in his book "Cruise of the *Curaçoa*" (1865) tells of a tie beam in a house at Uji, Solomon Islands, in the western Pacific, on which was carved and painted a scene showing sharks and a large barracuda attacking and devouring men round an overturned boat. This tie beam Brenchley figures, and the barracuda is readily recognizable. Moreover, this barracuda has in its mouth a partly devoured fragment of one of the bodies. This plainly shows that the natives of this village knew that the barracuda attacks men struggling in the water. Later Günther, the ichthyologist and for a long time keeper of fishes in the British Museum, tells us on the authority of the well known fish collector of the central Pacific, Andrew Garrett, that the barracuda of the South Seas attains a length of 8 feet, and that such huge specimens are dangerous to bathers.

In the Indian Ocean this fish is also found, and Nicolas Pike relates in "Subtropical Rambles," etc. (1873) that, while United States consul at Port Louis, Mauritius (in the western Indian Ocean) sixty years ago, he never went wading on the reefs without wearing heavy boots and carrying a fish spear to protect himself against the attacks of barracudas, which, he said, "came right at me like bulldogs." And last of all Wood-Jones, in his book (1912) on the Cocos Keeling atoll (northeastern Indian Ocean), where he was medical officer for some years, relates that:

> The barracouta has, however, left its mark upon at least one man, and I have seen a Cocos native the whole of whose calf muscles had been torn away by the cruel teeth of this large [marine] relative of the pike. The barracouta is an ugly and dangerous fish, for it is of all sea creatures the most difficult to see, and it has a habit of dashing upon whatever stirs in the water.

3. Mowbray, L. L.: The Barracuda, Bull. New York Zoological Society, **25**: 143-144, 1922.
4. Holder, C. F.: Big Game at Sea, 1908.

SUMMARY

1. It is recognized by all the natives of the Gulf-Caribbean region that the barracuda is more apt to attack man than is the shark.

2. Wounds made by a barracuda are easily differentiated from those made by a shark since they are straight cuts, whereas those made by the shark are curved, because of the shape of its jaws.

3. Food-getting on the part of the barracuda is more dependent on optical than on olfactory reactions.

4. While the barracuda, attracted by a flashing object in the water, may hesitate in his attack and come again, he has never been known to strike more than once. If the object is not to his taste, he lets go and passes on.

5. Representatives of the genus *Sphyraena* are found in all warm seas, have similar habits, and hence are all dangerous to man when they attain large size, as most species do.

6. There is little doubt that the barracuda, of all marine fish, is the one most dangerous to man.

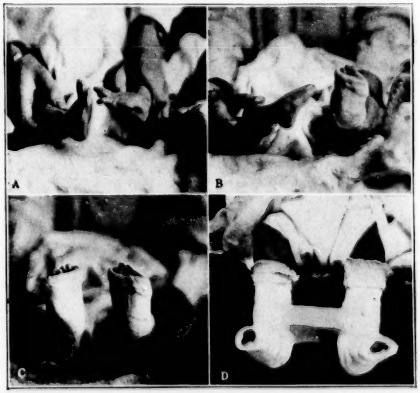
Seventy-Seventh Street and Central Park West.

## *Clinical Notes, Suggestions and New Instruments*

### IMPROVED TECHNIC IN THE APPLICATION OF PLASTER-OF-PARIS CASTS IN THE TREATMENT OF CONGENITAL CLUBFOOT

PHILIP LEWIN, M.D., CHICAGO

The illustration accompanying this clinical note indicates a modification of the technic of the application of plaster-of-paris casts used in the treatment of clubfoot. In addition to the routine application of casts, one applies a crossbar of plaster with a foundation consisting of two wooden tongue depressors cut to the required length. One tongue depressor is placed over and the other under the completed casts at a point about 1 inch (2.5 cm.) above the internal malleolus.




*A*, congenital clubfoot in a child 11 days old; *B*, one foot corrected and in plaster cast; *C*, both feet corrected; *D*, crossbar made of two tongue depressors to maintain outward rotation of legs.

A few turns of plaster bandage are then applied, making a solid but very light crossbar connection. This may be used to hold the legs in any position of external rotation which is usually desirable. It is noteworthy that after treatment and correction of clubfoot there often remains an inward rotation of the lower legs or entire lower extremities which causes disability and a visible deformity.

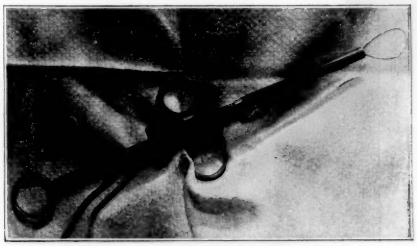
The method described here will eliminate a considerable portion of this deformity and will undoubtedly reduce to a minimum the number of patients requiring extensive casts, braces or osteotomies.

104 South Michigan Avenue.

### ELECTROSURGICAL OR SURGICAL DIATHERMY SNARE

JOSEPH PRENN, M.D., BOSTON

The snare is made of metal, but the stylet or cannula is insulated on the inside, as is also the block that contains the electric post, as well as the head of the screw that holds the wire.



Electrosurgical or surgical diathermy snare.

An interesting feature is the insulated wire used. The insulation is off on the distal or cutting side and is equivalent to a very fine cutting edge. The tissue that is to remain is thus protected by the insulation while the cutting electric current is facing that which is to be removed. The same principle may be applied to other cutting instruments that are used in electrosurgery.

It is to be used as a knife, the wire loop being moved toward the operator, or as a fixed loop, the whole instrument being moved either way.

536 Commonwealth Avenue.

### AN UNUSUALLY LONG DIVERTICULUM OF THE ESOPHAGUS

A. H. FINEMAN, M.D., NEW YORK

Diverticula of the esophagus are generally classified into two varieties: the traction type and the pulsion variety. The former may occur at any part of the esophageal tube as a result of traction or a "pulling effect" by some chronic organic disease in the chest, such as tuberculous tracheobronchial glands, mediastinitis or vertebral caries. The latter usually occurs at the pharyngo-esophageal junction and is formed by a protrusion or "pushing" backward of the undefended triangular space, bounded above by the lower margins of the inferior constrictors, and below by the superior border of the posterior wall of the esophagus. This triangular area is frequently referred to as the "pharyngeal dimple" and consists of mucous membrane and submucosa. The inconstancy of muscle fibers at this site is a predisposing factor of pressure diverticula. Pulsion-traction diverticula are also described by some authors.

The pressure diverticulum usually passes down behind the upper portion of the esophagus and is found situated in the lower part of the neck but may dissect its way down the superior mediastinum. It often dilates into a large pouch. Rarely, however, does it extend down the greater part of the

posterior mediastinum. A review of the literature failed to reveal the report of a case similar to the one here described.

REPORT OF CASE

S. R., a housewife, aged 60, consulted me, Oct. 14, 1926, because of epigastric distress of one month's duration. She weighed 130 pounds (59 Kg.), while one year before she had weighed 145 pounds (65.8 Kg.). Physical examination was entirely negative. March 15, 1927, she complained of increasing discomfort in the epigastrium with general weakness and loss of weight. Her weight now was 126 pounds (57.2 Kg.). Roentgenoscopy of the gastro-intestinal tract did not reveal any evidence of abnormality or organic disease. May 9, 1927, her weight was 122 pounds (55.3 Kg.), and the foregoing symptoms were markedly aggravated. In addition, she complained of some difficulty in swallowing and of pain behind the lower part of the sternum. Two months later a roentgen-ray examination showed some irregularity in the posterior wall of the terminal part of the esophagus. There was delay in the emptying of the opaque substance into the stomach. The stomach tube encountered obstruction at about 14 inches from the teeth. These observations strongly suggested carcinoma of the lower end of the esophagus, although cardiospasm could not be excluded.

Oblique view of the chest showing an elongated diverticulum, commencing at the upper margin of the esophagus and extending down, behind the latter, through the greater part of the posterior mediastinum. The width of the diverticulum appears larger than that of the esophagus.

The patient was admitted to the Memorial Hospital, July 13, 1927. Two days later, after preliminary local anesthesia, an esophagoscope was passed. Only a stricture or narrowing at the lower end of the esophagus was seen. On gradual withdrawal of the instrument, the normal collapsing of the walls of the esophagus was observed. On the following day a roentgen-ray examination of the gastro-intestinal tract revealed a carcinoma of the cardiac end of the stomach. At the same time a most unusual abnormality of the esophagus was noted, which was confirmed by fluoroscopic examination. With the patient in the oblique position, the barium mixture was seen to pass not only into the esophagus but also into an elongated sac which commenced at the back of the entrance of the esophagus and extended down posteriorly, through the mediastinum, terminating in a dilated pouch near the diaphragm.

The accompanying illustration shows this condition.

Five days after admission to the hospital, the patient experienced sudden, severe pain in the chest and in the right upper portion of the abdomen. She became cyanotic and dyspneic, and died within a few hours.

COMMENT

It is of interest to note that the esophageal diverticulum occurring in this patient was discovered only after the third roentgen-ray examination of the gastro-intestinal tract. The failure to observe this unusual anomaly in the first roentgen-ray series was probably due to the fact that an oblique view of the chest was not taken. Roentgen-ray and fluoroscopic examination of a patient in the latter position often reveal conditions which otherwise go unrecognized.

When a person past 50 years of age complains of pain in the throat, dysphagia and regurgitation of food associated with loss of weight, a diagnosis of pulsion diverticulum of the esophagus should be considered. Cases of this type of anomaly have been reported in which extreme emaciation occurred. How much of the loss of weight in this patient was due to the diverticulum cannot be estimated because of the presence of a coexistent gastric carcinoma.

Pulsion diverticula of the esophagus, including those situated in the neck and superior mediastinum, have been successfully removed. According to some surgeons they should be extirpated as soon as discovered, even though small and not causing any symptoms. The removal of an unusually long diverticulum, similar to the one here described, would be very hazardous.

645 West End Avenue.

V 90
1928

## A RIB PERIOSTEAL STRIPPER AND RASPATORY FOR EXTRAPLEURAL THORACOPLASTY

RALPH C. MATSON, M.D., PORTLAND, ORE.
Comedical Director, Portland Open Air Sanatorium, Milwaukie, Ore.

The operating time of multiple rib resections for the purpose of collapsing the chest wall in the treatment of pulmonary tuberculosis or chronic pulmonary suppuration should be reduced to the minimum consistent with thoroughness.

The most time-consuming part of a thoracoplasty is preparing the rib for subperiosteal resection. It follows that the fewer the instruments required and the fewer necessary manipulations of them, the quicker the act will be accomplished.

Separation of the periosteum from the outer flat surface of the rib with the usual periosteal elevator or gauze sponge is as a rule rapidly done. But separating the periosteum along the inner surface and at the upper and lower borders of the rib at the attachments of the intercostal muscles is tedious, particularly if there has been some periostitis secondary to pleurisy.

The Doyen raspatory is not practical. Because of the varying diameter of the ribs and, furthermore, the direction of the fibers of the intercostal muscles, it is impossible for the instrument to follow the rib subperiosteally and keep contact with both the lower and upper edges. When the Doyen raspatory is pushed laterad (as in a posterior thoracoplasty) being then in the direction of the intercostal fibers above, the upper edge is stripped clean; but the instrument is at the same time running counter to the direction of the intercostal fibers below, and they are usually torn and left adherent to the lower border of the rib.

Fig. 1.—Rib periosteal stripper and raspatory for thoracoplasty.

John Alexander's[1] rib edge periosteal stripper has entirely overcome the disadvantages of the Doyen raspatory. But since the Alexander instrument is a rib edge stripper, the Doyen raspatory or some other type of raspatory or periosteal elevator is necessary to separate the periosteum from the inner surface of the rib.

1. Alexander, John: New Instrument for Subperiosteal Costectomy, J. A. M. A. **83**: 443 (Aug. 9) 1924.

After much experimentation on cadavers, Andrias Plenk and I[2] devised an instrument four years ago which overcame most of the objections of other instruments. Since then, I have greatly modified the instrument, adding to it a raspatory, so that without the aid of other instruments and with a minimum of preparation of the outer surface of the rib and its upper and lower borders, the rib may be entirely freed of its periosteum by one lateral stroke along the upper border and one mesial stroke along the lower border of the rib between the points of resection.

Fig. 2.—Longitudinal periosteal cut with raspatory.

Fig. 3.—Separating the erector spinae and other small muscle bundles between the transverse process and angle of the rib with raspatory.

The instrument is shown in figure 1.[3] It has on one end a slightly curved raspatory, which is flat on its concave surface and rounded on its convex surface. On the other end is a broad U shaped periosteal separator, which is flat on its concave surface and slightly rounded on its convex surface, thus giving a blunt scraping edge incapable of cutting the pleura.

The technic of stripping the rib of its periosteum with the instrument preparatory to resection is as follows:

Step 1 (fig. 2): A longitudinal cut is made through the periosteum with the tip of the raspatory along the middle of the outer surface of the rib.

Fig. 4.—*A*, separating the periosteum on the upper border and inner surface of the rib mesially for insertion of the stripper; *B*, same on the lower border laterally at the point of resection.

Fig. 5.—Separating the periosteum and attached intercostal muscles from the upper and lower borders of the rib; also its inner and outer surface by one stroke of the stripper laterad and one stroke mesially.

Step 2 (fig. 3): With the raspatory end, the fibers of the erector spinae and other small muscle bundles attached to the outer surface and edges of the rib are separated between the angle and the transverse process.

Step 3 (fig. 4 *a*): One or two centimeters of the upper edge of the rib mesially is freed of its periosteum by a few strokes of the raspatory. This separation should be extended over the upper edge of the rib and down the inner surface from 0.5 to 1 cm., so as to produce a small pocket between the periosteum and the rib for the entrance of one arm of the periosteal separator. A similar separation of periosteum (fig. 4*b*) is made with the raspatory along the lower edge of the rib laterally at the point of resection.

Step 4 (fig. 5): One arm of the separator with its tip keeping close contact to the rib is inserted into the small pocket between the rib and periosteum (previously prepared at the upper edge of the rib mesially), and one stroke is made laterad to the point of resection, the separator being kept snug against the inner surface of the rib. The periosteum will fall away along the upper edge and most of the inner surface, without leaving any fragments. The separator is then turned over and the other arm engaged in a similar way in the small pocket along the lower edge laterad, and one stroke is made mesially to the point of resection.

Fig. 6.—Separating any remaining portions of the periosteum on the inner surface of the rib with the raspatory.

Step 5 (fig. 6): As a rule, the rib will be entirely freed of its periosteum. In the event that the periosteum is still attached to the inner surface, one or two strokes with the raspatory will suffice to free it entirely.

The advantage of the instrument is that it does not require a Doyen raspatory or any other instrument, and the whole stripping process is completed with a few strokes of one instrument, thus saving much time.

Medical Arts Building.

2. Matson, R. C., and Plenk, Andrias: Ein Raspatorium zur Thorakoplastik, Zentralbl. f. Chir. **53**: 786 (March 27) 1926.
3. Manufactured by George Tiemann & Co., 107 East Twenty-Eighth Street, New York.

## *Council on Pharmacy and Chemistry*

### NEW AND NONOFFICIAL REMEDIES

THE FOLLOWING ADDITIONAL ARTICLES HAVE BEEN ACCEPTED AS CONFORMING TO THE RULES OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR ADMISSION TO NEW AND NONOFFICIAL REMEDIES. A COPY OF THE RULES ON WHICH THE COUNCIL BASES ITS ACTION WILL BE SENT ON APPLICATION.

W. A. PUCKNER, SECRETARY.

**POLLEN EXTRACTS-SWAN-MYERS** (See New and Nonofficial Remedies, 1928, p. 38).

Also marketed in packages of one vial containing, 2,000 units.

**CONCENTRATED POLLEN EXTRACTS-SWAN-MYERS** (See New and Nonofficial Remedies, 1928, p. 30).

The following product has been accepted:

*Biennial Sage Concentrated Pollen Extract-Swan-Myers.*

Prepared by the method given for concentrated pollen extracts-Swan-Myers (New and Nonofficial Remedies, 1928, p. 30).

**DEXTROSE** (See New and Nonofficial Remedies, 1928, p. 244).

The following dosage forms have been accepted:

*Glaseptic Ampoules Solution Glucose, 50 per cent, 20 cc.:* Each ampule contains dextrose, U. S. P., 10 Gm., in distilled water, to make 20 cc.; buffered with sodium citrate, 0.25 per cent.

Prepared by Parke, Davis & Co., Detroit.

*Glaseptic Ampoules Solution Glucose, 50 per cent, 50 cc.:* Each ampule contains dextrose, U. S. P., 25 Gm., in distilled water, to make 50 cc.; buffered with sodium citrate, 0.25 per cent.

Prepared by Parke, Davis & Co., Detroit.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

535 NORTH DEARBORN STREET - - - CHICAGO, ILL.

Cable Address - - - - "Medic, Chicago"

Subscription price - - - - - - Five dollars per annum in advance

*Please send in promptly notice of change of address, giving both old and new; always state whether the change is temporary or permanent. Such notice should mention all journals received from this office. Important information regarding contributions will be found on second advertising page following reading matter.*

SATURDAY, JUNE 16, 1928

## THE METABOLISM OF CALCIUM AND PHOSPHORUS IN RICKETS

The pioneer experimental investigations of Edward Mellanby in England on the production of rickets in animals have in large measure given the impetus for the more recent extensive studies of this disorder. Ten years ago he [1] announced the successful production of the typical bone defects by means of a diet lacking in "an accessory factor" and thus paved the way for the consideration of rickets as a deficiency disease due to a shortage of some antirachitic factor. Mellanby's experiments [2] were performed on puppies. In reviewing the work, Park [3] has offered the following criticism: Mellanby's diets were more crude than those of some other investigators; the salt composition of the diets was not taken into consideration; good histologic studies of the bones and chemical examinations of the blood were lacking; the criteria on which chief reliance was placed were not satisfactory. Nevertheless, Park adds, the experiments of Mellanby constitute pioneer work and as such were splendid. To him belongs the credit of establishing the relationship between the development of rickets and the deficiency of a vitamin in the diet.

At about the same time, several American investigators began to present demonstrations of the production of rickets in the rat by means of diets having specific defects in their salt composition. These now well known studies strengthened the conclusion that the etiologic factor in rickets is to be found in an improper dietetic regimen. An important consequence was the noteworthy demonstration of the existence of the so-called vitamin D and the equivalent antirachitic potency of sunlight and certain products "activated" thereby. The disturbances in the salt equilibrium in the blood which are associated with rickets and which characterize it are familiar. The concentrations of phosphorus in particular are likely to be reduced and the ratio between phosphorus and calcium is likely to be altered. The total inorganic material in the bones is greatly reduced; yet in the rachitic individual the ratio of calcium to phosphorus in the bone does not differ materially from that in the bone of normal individuals.

For some time evidence has been available that in rickets the amounts of calcium and phosphorus retained are less than in healthy persons. Elaborate studies of the balance of these elements in experimentally produced rickets have been conducted by Shohl [4] and his co-workers at Yale University. Their investigation of the metabolism shows that development of severe rickets is associated not with a negative balance but with a diminished positive balance of both calcium and phosphorus. In some of their experiments with puppies, although the phosphorus in the diet exceeded the calcium, the phosphorus balance was smaller or even negative. This indicates an exception, the Yale biochemists point out, to the widely accepted belief that the element of which least is consumed is the limiting factor in nutrition. In rickets the limiting essential may be concerned with the unknown constituents of the diet. The action of vitamin D, they add, thus indicates a new mechanism in the stabilization of calcium and phosphorus metabolism. Shohl and Bennett stress that incorrect emphasis is often laid on calcium in contradiction to phosphorus in ossification. The process is often referred to as calcification; but in the eyes of these investigators the more important defect in rickets lies in the inadequate retention of phosphorus.

1. Mellanby, Edward: The Part Played by an "Accessory Factor" in the Production of Experimental Rickets, J. Physiol. **52**: 11, 1918.
2. Mellanby, Edward: Experimental Rickets, Medical Research Council Special Report Series 61, London, 1921, H. M. Stationery Office.
3. Park, E. A.: The Etiology of Rickets, Physiol. Rev. **3**: 106 (Jan.) 1923.
4. Shohl, A. T., and Bennett, Helen B.: Rickets in Dogs: Metabolism of Calcium and Phosphorus, J. Biol. Chem. **76**: 633 (March) 1928.

## SLEEP

Sleeplessness is a perennial problem in the professional routine of the physician, frequently and persistently demanding relief. Nevertheless, the physiologic basis of sleep remains unsolved. The familiar fact that there are alternating periods of rest and activity and the implication that sleep represents a period of comparative rest or inactivity offer little aid in the practical management of insomnia. Hence Kleitman [5] well remarked a few years ago that most investigators of the physiology of sleep, in reporting their observations, remind their readers, by way of apology, of the tremendous importance of the subject for the advancement of our knowledge of physiology as a science, as well as for the rational treatment of insomnia. They like also to record the fact that the average person spends more than a third of his life in sleep and has been doing this from time immemorial, and they raise the question whether eight hours or more of sleep a day really constitutes the minimum penalty for keeping

5. Kleitman, Nathaniel: Studies on the Physiology of Sleep: I. The Effects of Prolonged Sleeplessness on Man, Am. J. Physiol. **66**: 67 (Sept.) 1923.

V 90
1928

awake the rest of the time. It seems reasonable to suspect, Kleitman adds, that, as in the case of protein consumption, there is a large "factor of safety" in the amount of sleep one gets, and that it could be considerably reduced without impairment of health or loss of efficiency.

There is no lack of theories of sleep. Some persons have assumed that diminution in the circulation through the brain is a decisive factor. Howell has remarked that many facts point to an anemic condition of the brain during sleep, and that some physiologists have believed that this condition precedes and causes the state of sleep, whereas others take the opposite view that it follows and is merely one result of sleep. There are engaging theories, too, that charge accumulated fatigue products or "toxins" with complicity in the genesis of sleep; and the list is by no means exhausted with such assumptions. Perhaps a definition properly characterizing sleep and distinguishing it from sleep-like rest states, such as hypnosis and coma, is more desirable. According to Piéron,[6] sleep is a suspension of the sensorimotor activities that bring the living being into relation with its environment. It is characterized by marked diminution of muscular tonus in general (with the exception of sphincters and a few other muscles) and the loss of the power of equilibrium; almost complete abolition of "spontaneous" activity; raising of the threshold of reflex irritability and general sensibility; and, most important, complete absence of critical reactivity, which normally involves analysis of sensations.

The extensive studies of Kleitman [7] at the University of Chicago have contributed to the elimination of many misconceptions about the subject. They show the preeminent importance of muscular activity in the ability to keep awake. Muscular relaxation induces sleep under normal conditions but practically precipitates sleep under conditions of experimental insomnia. The latter does not produce any striking physiologic manifestations in human subjects. In the Chicago tests blood sugar, alkali reserve of the blood and plasma, percentage of hemoglobin, percentage of corpuscles, red and white blood cell count, body weight, basal metabolic rate, appetite, temperature, and the ability to name letters and to do mental arithmetic all showed no variations from normal during the period of sleeplessness. Respiration, heart rate and blood pressure showed a marked decrease in insomnia, but this decrease was mainly due to greater muscular relaxation of the sleepy person.

The onset of sleep is probably due to complete muscular relaxation, voluntary or involuntary. This has been substantiated on animals also by Kleitman. They exhibited the same ability to stay awake with apparent ease while the muscles were contracting, and the same inability to resist sleep when the muscles of the body were allowed to relax. There is direct and indirect evidence that anemia of the brain is not a necessary condition for sleep in puppies. Kleitman adopts the theory of the existence of "levels" in the central nervous system. He accepts the doctrine of Hughlings Jackson that the most complex nervous arrangements, centers and levels are the least organized; the simple, the most organized. The highest levels are conceived to be much more susceptible to fatigue, intoxication or any kind of injury than are the lower levels. Thus sleep may be due to fatigue of the highest centers of consciousness, and dreaming to the persistence of the activity of the lower centers. Kleitman's latest experiments are in support of the working hypothesis which holds that sleep comes from a decrease in the number of afferent impulses reaching the central nervous system from the sensorium, and that muscular relaxation, decreasing considerably the number of proprioceptive impulses, constitutes the last stage of the process by which sleep is precipitated.

6. Piéron: Le problème physiologique du sommeil, Paris, 1913.
7. Kleitman, Nathaniel (footnote 1); Studies on the Physiology of Sleep: V. Some Experiments on Puppies, Am. J. Physiol. **84**: 386 (March) 1928.

## NEW METHODS FOR STIMULATING THE HEALING OF WOUNDS

More and more the trend of modern surgical thought is away from the paths of anatomy and pathology into physiology and the more complicated fields of biology and biochemistry. This tendency may be observed in modern research into the fields of infective and suppurative processes. An infected wound is viewed first from the point of view of biologic processes taking place in the infected area itself, and secondly as to the effects resulting from the reaction of the organism as a whole on the local process.

Normal life is expressed in a definite reaction which is neutral or slightly alkaline, expressed in hydrogen ion concentration as $p_H = 7.0$ to $7.35$. The normal metabolism of tissue cells gives rise to acidity. This acidity is at once neutralized by substances within the tissues and particularly by substances contained in the circulating blood and constituting the so-called alkali reserve. The metabolism of an infected area is naturally greatly increased. Necrosis and accumulation of products of cell destruction give rise to acidity, which in its turn provokes in the surrounding tissue and in the organism itself a characteristic reaction. This reaction is characterized by a rise in acidity. With the aid of a complicated technic, Rhode [1] was able to determine the hydrogen ion concentration of the component parts of an inflammatory area. Necrotic areas no longer in contact with living tissue gave the lowest $p_H$ figures, indicating a state of marked acidity. Somewhat lesser acidity was demonstrated to be present in the pus and in the necrotic tissue still in contact with

1. Rhode: Die örtlichen Vorgänge bei der Wundinfection, Zentralbl. f. Chir., 1927, p. 2134.

living tissues. The hydrogen ion concentration index for the entire area was always below 6.8. The surrounding zone of infiltration showed either a normal index or slight acidity, but never less than 6.8. The $p_H$ index always rose as one proceeded from the area of complete necrosis toward the inflammatory zone and healthy surrounding tissue. In this way the tissues of the inflammatory zone and the healthy tissues maintain the acid-base equilibrium necessary for cell life. This constitutes the regulating function, the "defense wall," of the cells surrounding a focus of infection. The employment of so-called buffer substances, used to raise the hydrogen ion concentration of infected areas and thus to lower acidity, is now in an experimental stage.

Besredka of the Pasteur Institute of Paris developed a method based on his conception of local tissue immunity and of a specific antivirus. A filtrate prepared from a bouillon or from ascitic fluid bacterial cultures is applied in the form of moist gauze dressings. Unfortunately Hendriock,[2] in careful experiments, could not find any value in the method. In his experience, wounds dressed with gauze moistened in sterile bouillon healed just as rapidly as those moistened with a bacterial filtrate according to Besredka.

Autohemotherapy, which originated with Vorschütz, has had wide application abroad. Schwartz [3] tried the method in 120 cases of postoperative pulmonary complications, injecting from 20 to 40 cc. of the patient's own blood into the gluteal muscles. Prophylactic application in the stage of initial bronchitis, he thought, resulted in lowering the temperature and in improvement of the general state. Pneumonia or pleurisy did not develop in a single case. When applied after the postoperative pneumonia had set in, the method gave good results in forty-one cases. The mortality was lower than in previous years. Läwen reported good results with induration or circuminjection of axillary suppurations with blood taken from the patient.

Finally, the much heralded newer antiseptic substances, such as rivanol (Morgenroth), acriflavine and trypaflavine, have on the whole given disappointing results in practical application.

Obviously, thus far startling results have not been obtained. It is fair to assume that, with the further extension of knowledge of immunology and of biochemistry, more successful methods will be evolved. For the present, practical experience can be summed up in the following generalizations: 1. Fresh wounds coming to treatment within the first eight hours are successfully treated by a thorough excision of the edges (the "débridement" of the French), followed by suture without drainage. This method results in primary healing in about 90 per cent of all cases. 2. Freshly infected wounds are rendered sterile much more quickly by the use of surgical solution of chlorinated soda, acriflavine, and similar substances than by any other means. 3. Abscesses in any location are best drained by a wide incision.

2. Hendriock, A.: Experimentele Untersuchungen über die preventive und localtherapeutische Wirksamkeit feuchter Verbände, insbesondere bei sogenannten spezifischen Verbände Besredka's, Zentralbl. f. Chir. **54**: 2325 (Sept. 10) 1927.

3. Schwartz: Eigenblutbehandlung, Zentralbl. f. Chir., 1927, p. 1383.

## *Current Comment*

### THE THYROID HORMONE IN RELATION TO THE PROTEIN RESERVES

The demonstration that a surprisingly large amount of nitrogen may be retained in the body as more readily metabolized deposit or storage protein [1] has raised anew the question of the mode of action of influences that increase the protein metabolism. Probably the most conspicuous, and perhaps the most familiar, instance is represented by the effect of the thyroid hormone. Administration of the latter is notably followed by a heightened basal metabolism and an increased excretion of urea. Whether the latter is derived from the protein reserves alone or stimulates the endogenous exchanges has now been more clearly established by studies at the Mayo Foundation.[2] Opportunity was afforded to test the effect of thyroxin on a healthy person who had experienced a reduction of the deposit protein equivalent to 149 Gm. of nitrogen by a preliminary period of thirty days on a nonprotein diet. This did not in any way alter the characteristic effect of thyroxin on the nitrogenous or respiratory metabolism. The output of urea increased in the usual manner without any appreciable change in the excretion of the other urinary nitrogen partition products. The creatinine, both preformed and total, the uric acid and the amino-acid remained at the same level as during the previous period when a larger reserve of protein was still deposited in the organism. The investigators argue that, if under the conditions of their experiment urea is derived entirely or almost entirely from the catabolism of deposit protein, the action of thyroxin on protein metabolism can be compared to the effect of epinephrine on carbohydrate metabolism, the difference being that the action of thyroxin is much more prolonged. Thyroxin increases temporarily the rate of elimination of stored protein just as epinephrine causes temporary liberation of stored carbohydrate. There is no evidence from this experiment that it causes a "toxic" breakdown of the living protoplasmic tissue since no change in the rate of elimination of those nitrogen partition products involved in endogenous metabolism was noted. It is well known that with marked loss of body weight the basal metabolism tends to be lowered. Evidently this is related to the protein reserve. In the Mayo Foundation study there was a rapid fall in the basal metabolic rate during the first eight days of the protein-free diet which occurred

1. Protein Reserves and the Nitrogen Minimum, editorial, J. A. M. A. **90**: 1713 (May 26) 1928.

2. Deuel, H. J., Jr.; Sandiford, Irene; Sandiford, Kathleen; and Boothby, W. M.: The Effect of Thyroxin on the Respiratory and Nitrogen Metabolism of a Normal Subject Following Prolonged Nitrogen-Free Diet, J. Biol. Chem. **76**: 407 (Feb.) 1928.

V 90
1928

coincident with the rapid decrease in the free utilization of deposit protein.[3] Thereafter, when the nitrogen excretion fell to lower levels, the basal metabolism remained practically constant. Subsequently, when the subject was on a high protein diet and replenishing his stores of deposit protein, the basal metabolism was definitely elevated above the normal level. Perhaps the "nutritive condition" of the person examined will require more attention, along with size, sex and, possibly, race in considerations of the basal metabolism.

## THE DANGERS FROM ELECTRICAL SHOCKS

A report recently made public by the bureau of statistics and information of the New York State Department of Labor serves as a renewed reminder that the mortality of accidents due to electricity is high. Electrical shocks from contact with live wires and other conductors carrying high voltage killed sixty-four men in that state alone during the fiscal year 1926-1927. During the last five years the annual number of compensated accidents increased from 338 to 578, or 71 per cent. Currents of from 100 to 250 volts, such as are customarily employed in furnishing energy to homes or workshops, are by no means devoid of danger, though they are often regarded as below the range of fatal voltage. But an unmistakable menace attaches to the high tension currents up to 100,000 volts that are now employed to transmit electric energy over long distances. Superpower is being developed in many places and thus the dangers have become greatly accentuated. The advent of the opportunities for catastrophes of electrical origin has been so rapid that neither the public nor the medical profession as a whole has attained that familiarity with the phenomena of electrical shock which gives assurance of the most effective aid at a moment of danger. Electrical burns are managed much as comparable injuries are conventionally treated. The circulatory and respiratory consequences of electrical shocks offer serious problems. Fibrillation of the heart, particularly in the case of the ventricles, has frequently been charged with responsibility for death. It is said that a fibrillating heart never recovers. Recalling, however, the reports of the successful resuscitation of electrocuted persons with the aid of artificial respiration, Jaffé [4] has questioned some of the current beliefs regarding the "cardiac deaths." He joins with other recent students in stressing the importance of vigorous attempts at artificial respiration. This may effect resuscitation of a paralyzed respiratory center. The passive movements of the chest should be started as soon as possible and continued for a sufficient time, even for hours. Nothing should stop them except unmistakable signs of cessation of life.[5]

3. Deuel, H. J., Jr.; Sandiford, Irene; Sandiford, Kathleen; and Boothby, W. M.: A Study of the Nitrogen Minimum: The Effect of Sixty-Three Days of a Protein-Free Diet on the Nitrogen Partition Products in the Urine and on the Heat Production, J. Biol. Chem. **76:** 391 (Feb.) 1928.

4. Jaffé, R. H.: Electropathology: A Review of the Pathologic Changes Produced by Electric Currents, Arch. Pathol. **5:** 837 (May) 1928.

5. Drinker, C. K.: Artificial Respiration in Electric Shock and Gas Poisoning, J. A. M. A. **83:** 764 (Sept. 6) 1924.

## PERMEABILITY OF THE UPPER RESPIRATORY MEMBRANES TO BACTERIA

The pathways by which micro-organisms secure entrance into the interior of their hosts have been widely debated. The blood and tissues are assumed to be protected by a variety of barriers to the entrance of infectious agents. Externally the intact skin offers such perfect resistance that it requires an abrasion or lesion of some sort to permit the ingress of bacterial invaders. This represents the contrast between the perfect integument and the wounded surface in the possibilities of harm from omnipresent micro-organisms. The mucous membranes of the respiratory passages and the alimentary tract are likewise considered to be quite resistant to infection so long as their epithelial structures remain uninjured and functioning normally. However, the protection thus afforded is probably not quite as perfect as we are wont to expect. According to McCampbell,[1] some bacteria can pass through the wall of the intestine when it is seemingly intact. This point has been repeatedly demonstrated in the case of the tubercle bacillus. A recent study by Bull and McKee [2] at the Johns Hopkins University School of Hygiene and Public Health has disclosed that, in the case of the rabbit at least, bacteria and their products readily and invariably pass through the mucous membrane of the upper air passages when in contact with its outer surface or growing on it. Virulent micro-organisms, such as pneumococci, soon appear in the blood stream and set up a rapidly fatal infection. Less virulent organisms also find their way into general circulation, but the resulting infection is frequently overcome and the animal recovers. If killed pneumococci are put into the nares, the organisms themselves cannot be demonstrated in the blood but antibodies specific for them soon appear in the plasma, indicating that either the cocci or their products penetrated the mucous membrane. It is possible, of course, that the antibodies may be produced locally and then absorbed. Such experimental facts call for greater caution in our assumptions of the protection commonly afforded by the mucous membranes.

1. McCampbell, E. F.: Marshall's Microbiology, ed. 3, Philadelphia, P. Blakiston's Son & Co., p. 671.

2. Bull, C. G., and McKee, C. M.: Permeability of the Upper Respiratory Mucous Membrane for Bacteria and Their Products, Proc. Soc. Exper. Biol. & Med. **25:** 496 (March) 1928.

**Routine Health Examinations.**—There is some feeling in the popular mind that the physician of the present day is not greatly endowed with knowledge or experience in things which lie outside the diagnosis and treatment of well recognized physical or psychical disease. I fear this is being to some extent confirmed by certain excellent physicians who think themselves too busy, not only to take time for discussing the imagined diseases of their patients, but also too busy to take time for the thorough examination of confessedly well men and women who wish to be examined as a routine health measure. Though the policy of annual examinations of children and of persons past the prime of life is earnestly advocated by authoritative speakers in many medical meetings, yet all too frequently the family physician, whose duty it should be to make such examinations, is inclined to treat them casually and to assure his apparently well patients of their perfect health without having made an examination sufficiently thorough to discover the beginnings of any one of a number of serious ailments, including tuberculosis, with which they may be affected.—Wilson, L. B.: Minnesota Med. **11:** 365 (June) 1928.

# PROCEEDINGS OF THE MINNEAPOLIS SESSION

## MINUTES OF THE SEVENTY-NINTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, HELD AT MINNEAPOLIS, JUNE 11-15, 1928

## *HOUSE OF DELEGATES*

### *First Meeting—Monday Morning, June 11*

The House of Delegates convened, and was called to order at 10 o'clock by the Speaker, Dr. Fred C. Warnshuis, Michigan.

**Preliminary Report of the Committee on Credentials**

A preliminary report of the Committee on Credentials was submitted by the chairman, Dr. J. D. Brook, Michigan, who reported that there had been filed with the committee registrations totaling ninety-one members with proper credentials. The report was considered the roll call of the House.

The minutes of the Seventy-Eighth Annual Session were adopted as printed.

### ADDRESSES OF EXECUTIVE OFFICERS

**Address of the Speaker, Dr. F. C. Warnshuis**

The Vice Speaker, Dr. Allen H. Bunce, Georgia, took the chair, after which the Speaker delivered his address:

*Members of the House of Delegates:*

Precedent, initiated by my predecessors, and observed by your Speaker on five former occasions, established the custom of a Speaker's Annual Address at the opening session of the annual meeting of the House of Delegates. I have complied with that precedent more or less inadequately. When occupied with the composition of such address I have experienced confusion and conflict of thought and mind. The uneasy moments were engendered by the fundamental thought that the office of Speaker is administrative and not executive or representative. Chapter V, Section 3, of our By-Laws defines the duties of the Speaker as: "Shall preside at the meetings of the House of Delegates and shall perform such duties as custom and parliamentary usage require. He shall have the right to vote only when his vote shall be the deciding vote."

Parliamentary manuals are silent on the question and do not imply that an annual address, dealing with the affairs, policies or obligations of an organization, is a duty or responsibility of its parliamentary officer. While the question "may be begged" and some justification advanced that since the House of Delegates concerns itself with the policies and obligations of our association its presiding officer would not be overstepping the bounds of propriety in commenting on these policies and responsibilities and tendering certain recommendations, yet to do so, without specific and definite instruction from the House, would be a trespass.

Our by-laws are very clear in providing that the President "shall deliver an address on such matters as he may deem of importance to the public and to the medical profession. He may attend the meetings and make suggestions to the House of Delegates or the Board of Trustees."

It has seemed to your Speaker that the quoted provisions render him liable to conviction of trespass on the prerogative of the President if he assumes to comment, proffer opinion or tender recommendations pertaining to subjects or policies beyond the pale of parliamentary regulations and the working policies of the House.

Such trespass or invasion on the rights of our President never was, nor so intended, as a wilful intent of poaching in a field specifically allocated to the President. Such apparent encroachment was induced on each occasion by expressed requests of individual delegates and some of the general officers of the Association that your Speaker make comment on certain specific subjects and tender recommendations to the House of Delegates. On three specific occasions such requests emanated from the distinguished presidents of our association.

However, in spite of these cited factors that inspired your Speaker to comply with such requests and incorporate such comments and recommendations in his annual address, the criticism has been presented to your Speaker by our Secretary who was instructed so to do by the Board of Trustees.

Your Speaker imparts this statement with the recommendation that the Reference Committee submit a definite ruling upon the extent and limitation of context of a Speaker's address. Such a precedent should be definitely established to relieve the Speaker of embarrassment when such requests come to him.

It is your present Speaker's personal opinion that, since our Presidents and Board of Trustees are already empowered to so address this House, it but adds to your labors when another avenue of approach is sanctioned. Individual requests may be submitted through these two channels and in addition each delegate has the authority to introduce any subject by a resolution submitted through established procedure. I am of the opinion that any opening remarks on the part of your Speaker should be confined to comments and recommendations dealing solely with parliamentary procedure and business expedients.

In compliance with such opinion, this present address will be so limited.

RECORD OF TRANSACTIONS

In their recording in THE JOURNAL and Minutes of the Annual Meeting the record of each session is caused to consist solely of reports, resolutions, record of vote and list of officers elected. Annually the House devotes much time, thought and labor in determining policies that are of vital and intense interest to the individual physician, to the profession as a whole and to the public. The delegates listening to and participating in these discussions and debates are in possession of the facts and reasons that impel the action that is taken. It must be remembered, however, that this House is constituted of but 175 members and that there are some 135,000 doctors who are uninformed as to the facts or reasons that support your actions. The statements and arguments advanced, as these vital subjects are considered, shed much light and impart definite information that might well be placed before all our Fellows and members. Therefore, while realizing that to do so would add materially to the size of our printed transaction and would entail considerable editorial supervision and expense, would it not be desirable so to enlighten our members by causing our transactions to include all the discussions that are voiced on the floor of the House? The suggestion is respectfully tendered for your consideration.

REFERENCE COMMITTEES

In the appointment of reference committees your Speaker diligently and impartially seeks to give equal representation to every state organization. This is no inconsiderable task, especially when there are but fifty-five appointees to be selected from a list of 175 delegates. Your Speaker recognizes the arduous labor that is thus assigned to these selected committeemen, and acknowledges the assistance they render in expediting the work of each session. Delegates are again urged to be prompt and expeditious in appearing before committee hearings. The request is made that as far as possible every delegate will aid the reference committees in the discharge of their laborious duties. A further suggestion is advanced to each reference committee to be thorough in its considerations and recommendations. Blanket generalized approval and endorsement of referred reports and resolutions may in instances be all sufficient. On the other hand, certain reports and resolutions demand careful detailed consideration and review. It is highly desirable that

V 90
1928

reference committees shall so govern their deliberations. This is not a criticism—it is an urge to circumvent superficial consideration of all of our association's affairs and activities.

CONCLUSION

I record and convey anew, with increasing realization of the responsibility entailed, my deep appreciation in being permitted to serve as your Speaker. To do so acceptably, impartially and in conformity to your personal delectation is the sole motive that ever governs me. I am humbly grateful for the trust you imply.

Dr. A. E. Bulson, Jr., Indiana, moved that the address be referred to the Reference Committee on Reports of Officers, and it was so referred without motion.

## Reference Committees

The Speaker appointed the following reference committees:

REPORT OF BOARD OF TRUSTEES

A. W. Booth, Chairman ..... New York
A. E. Bulson, Jr. ..... Indiana
C. E. Mongan ..... Massachusetts
M. M. Cullom ..... Tennessee
J. Norman Henry ..... Pennsylvania

REPORTS OF OFFICERS

N. B. Van Etten, Chairman ..... New York
W. H. Seemann ..... Louisiana
C. W. Waggoner ..... Ohio
D. E. McGillivray ..... Washington
E. P. Sloan ..... Illinois

AMENDMENTS TO THE CONSTITUTION AND BY-LAWS

E. C. Thrash, Chairman ..... Georgia
Seale Harris ..... Alabama
B. L. Bryant ..... Maine
Randolph Winslow ..... Maryland
Albert Soiland ..... California

HYGIENE AND PUBLIC HEALTH

A. D. Dunn, Chairman ..... Nebraska
V. G. Vecki ..... California
E. J. Goodwin ..... Missouri
S. P. Mengel ..... Pennsylvania
H. M. Brown ..... Wisconsin

LEGISLATION AND PUBLIC RELATIONS

Irvin Abell, Chairman ..... Kentucky
Carl F. Moll ..... Michigan
C. E. Humiston ..... Illinois
George M. Fisher ..... New York
Southgate Leigh ..... Virginia

MEDICAL EDUCATION

W. A. Pusey, Chairman ..... Illinois
F. B. Lund ..... Massachusetts
G. C. Madill ..... New York
Holman Taylor ..... Texas
J. L. Rothrock ..... Minnesota

RULES AND ORDER OF BUSINESS

H. P. Linsz, Chairman ..... West Virginia
G. P. Johnston ..... Wyoming
E. A. Hines ..... South Carolina
William Kuykendall ..... Oregon
J. S. Helms ..... Florida

MISCELLANEOUS BUSINESS

W. G. Ricker, Chairman ..... Vermont
D. E. Sullivan ..... New Hampshire
C. T. Pigott ..... Montana
W. A. Cook ..... Oklahoma
T. E. Ross ..... Mississippi

REAPPORTIONMENT

The Committee on Reapportionment is appointed every third year. There is a provision that the Speaker and the Secretary of the House shall be members of the committee.

Olin West, Chairman, Secretary
Fred C. Warnshuis, Speaker
P. S. Roy ..... District of Columbia
R. L. Green ..... Illinois
A. T. McCormack ..... Kentucky

SECTIONS AND SECTION WORK

Isaac A. Abt, Chairman ..... Section on Diseases of Children
John O. Polak ..... Section on Obstetrics, Gynecology and Abdominal Surgery
J. C. Litzenberg ..... Minnesota
J. N. Hunsberger ..... Pennsylvania
William Jepson ..... Iowa

COMMITTEE ON CREDENTIALS

J. D. Brook, Chairman ..... Michigan
Martha Welpton ..... California
J. F. Hassig ..... Kansas
H. J. Brown ..... Nevada
J. G. Murphy ..... North Carolina

The Speaker resumed the chair.

## Address of President Jabez North Jackson

The Speaker introduced the President, Dr. Jabez North Jackson, Kansas City, Mo., who delivered the following address, which was referred to the Reference Committee on Reports of Officers:

*Mr. Speaker, and Members of the House of Delegates:*

Through your kindness two years ago at Dallas it became my privilege to represent officially the greatest of all professions. In accepting the honor I have been fully conscious of the fact that our organization represents close on to one hundred thousand doctors. Of this number the vast majority are doctors in direct and active service of the people.

We are all rightly proud of the achievements of medical science within the past generation. Other sciences have filled the world with obvious wonders and revolutionized civilization. None, however, has so fully served the essential bases of civilization, life and health. None probably has added even equally to material wealth. Fifteen years added to the space of productive creation yields much to added values. The passing away of those scourges and pestilences of disease which once not only took such a toll of human life but as well paralyzed commercial life has meant vast savings of loss. In the scales of economic service alone the world owes much to the contributions of our profession.

With these glorious days of science have come, however, some equally vital changes affecting the practice of our profession which are worthy of our review.

(*a*) Forty years ago in the average community the services of a doctor were pretty well occupied with typhoid fever and malaria; with dysentery and the bowel complaints of infants. Modern science has practically eliminated them, and with them a large proportion of the doctor's income. And herein is found the explanation for the scarcity of doctors in country communities. It is purely an economic question. The doctor, after all, must have assurance of a living income, and the great saving in sickness has robbed him of his job. He must have a greater population to serve or a wider territory to cover. It is probable that good all-the-year roads will do more to serve the country's needs than any change in educational standards.

(*b*) Forty years has added an enormous increase in expense in time, in brain effort and in money to secure an education in medicine. Once to enter the study of medicine required but a desire. Now is demanded the trained and disciplined mind which two years of college after high school, four years of medical lectures and one year of hospital service are needed to prepare. These years of training are of necessity unproductive, speaking in a material way. But schooling expenses, tuition, books and equipment must be met. To become a doctor today involves a pretty fair material as well as mental capital.

(*c*) The vast additions to medical knowledge which modern science has brought have made it impossible for one mind to acquire expert proficiency in all lines. Thus has developed specialization, outrageously overdone, it is true, but still popular. Again the general physician has seen his field narrowed and his source of legitimate income lessened. In fact, he has been reduced almost to a broker, distributing his prospects to varied specialists. To make a legitimate living is difficult.

(*d*) Modern medical science has also called more and more for institutional care in hospitals. This is undoubtedly better for the sick in a medical way. With it has come, however, the financial problem of added expense to the patient and reduced ability to pay the doctor; likewise, if the doctor has not easy access to hospital service, the loss of the particular patient entirely.

The multiplication of scientific necessities has at the same time brought an enormous increase in the expense of hospital management, and the hospital problem becomes one not alone to the patient but as well to the management of the institution.

This simple review of the material developments in medicine with the growth of science reveals the obvious need of outside aid. The masterly presidential address of Dr. W. W. Keen to the American Medical Association in 1900 sounded the call for financial aid to medical science. The response was prompt, and amazing in its vastness. Endowments for medical schools,

institutions for research and hospitals have been poured out with boundless generosity, surely a masterly evidence of the appreciation of the value of medical science as well as an expression of amazing tribute to the broad charity of American wealth. Too great a tribute of praise to these noble men and women cannot be expressed.

Out of this broad spirit of charity and generosity has come, however, a problem most vital to our profession. I refer to increasing dangers of the abuse of charity. In the pride of achievement comes the natural desire to do more and better things. A good medical school made possible by an endowment of one million dollars in Chicago spurs on ambition for a better in New York with two millions. A splendid hospital caring for two hundred patients invites effort for one more magnificent to care for five hundred. A bond issue made possible by the generosity of the citizens of Kansas City calls for an even greater one in Minneapolis. A "child welfare clinic" originated by one set of good women from one church or social organization on the east side invites the equal spirit of another church or society on the west side. All of these ambitions are worthy and merit our praise. Even worthy competition may, however, lead to unexpected and undesired ends. And this, we fear, is coming to pass in many places. To show a need for a given charity it seems necessary to make a numerical show of demand. And there are always plenty ready to get something for nothing. The man of the city who has voted for the hospital bonds, even though he has paid no taxes, feels a right to its services without pay and regardless of his ability to secure such services from private source. A clinic bearing the name of a great medical school or connected with a great hospital certainly seems to offer the best — and for nothing.

Now there is not a single hospital or clinic of any description offering free services that could continue for a month without the free and generous service of some doctor or staff of doctors. And for a true and pure charity there will always be found plenty and the best in the profession, ready and willing to serve at all times day and night; in cold or in warm; in storm or in sunshine. The grocer does not give his produce or as a rule reduce his price. The plumber does not install the pipe for generous pleasure. The milkman is quite careful of his measure. Have we not a right, therefore, to insist that our free services be limited to those truly worthy of charity? In a large metropolitan city an outstanding surgeon in a magnificently built and equipped hospital receives remuneration for only eight out of one hundred patients operated on. In another institution, patients have been received who were not only able but anxious to pay a surgical fee; but the patient was a charity case as far as the hospital was concerned and the surgeon was not allowed to accept even a comparative "tip" of compensation.

Such practices are a most flagrant injustice to the men who serve the institution. Where, as is sometimes the case, these attendants are salaried professors, the custom is more unfair to the worthy and honorable physician on the outside who might otherwise have had a small stipend added to his meager income.

I feel that the time has come when (1) no institution or clinic should permit its attending physicians to be imposed on, and (2) when, whatever the social or other advantage to the physician in the clinic, he should not be permitted to contribute to what is a gross injustice to the profession as a whole.

I therefore desire to recommend for your consideration the creation of some sort of an agency within our association to meet this problem. Perhaps it might be known as the "Committee (or Council) on Medical Charities and Economics." Or it might be better to add this service to some other existing agency such as the Judicial Council. It should, however, be a permanent assignment. The first duty would be to investigate all medical charities to ascertain their position in this problem. Following this investigation a classification should be made. Those which respect medical rights should be classified as "approved." Those which do not should be classified as "not approved."

In making this classification the council or committee should formulate rules determining what shall constitute proper medical charity, this classification to guide both the charities and the profession.

Similar councils should be recommended to the various state societies and to their component county societies for direction of efforts in their respective fields.

To serve a charity or clinic "not approved" should be declared a violation of ethics with its appropriate penalty.

The medical profession owes fair and competent service to the people. This has been much argued. But as well the public owes fair treatment to the practitioner.

### Address of President-Elect W. S. Thayer

The Speaker introduced the President-Elect, Dr. William S. Thayer, Baltimore, who delivered the following address, which was referred to the Reference Committee on Reports of Officers:

*Mr. Speaker, Members of the House of Delegates:*

With the large program which you have before you, you should not want to listen to platitudes or advice from others at this minute, and I shall not waste your time. A few words, however, I would say. My experience during the past year in attending the meetings of the Board of Trustees and other councils, committees and conferences has given me a more intimate acquaintance than had been mine before with the personnel and machinery of the American Medical Association, and I should like to say here, as I shall later in my more formal remarks, how sincerely I have been impressed by the character of the occupants of the executive offices of the Association and by the spirit which animates them. More than ever do I feel how important it is that the rank and file of the medical profession of America should appreciate the duty of devotion and loyalty to this mother organization.

Our Secretary and General Manager, to whom I take off my hat, has referred to the present tendency toward overorganization of the profession. In these days of specialization it is natural that groups of men interested in special subjects should seek more and more to gather together for intimate discussion of special problems. This is as it should be, but it would be unfortunate if it diminished their interest in this association, for specialism which removes its adepts from the general considerations of medicine and surgery or from association with their colleagues interested in other branches of study and work is narrow and sterile, if not dangerous.

In addition there have arisen in recent years many sectional and local societies and clubs, as well as several organizations, the meetings of which consist largely of lectures or demonstrations by invited guests from all over the world. Such gatherings have been instructive and very popular. These various special and general medical societies have become numerous, so numerous that for one who, like the speaker, belongs to a number, it is quite impossible to attend but a small proportion of the meetings. None of these organizations in any sense take the place of this association to which the physician owes his primary loyalty, without which medicine in America would be chaotic. At these annual scientific gatherings is reviewed most of the new work, most of the important progress of the year. He who attends them, and distributes his time as he should, familiarizes himself with the scientific exhibit and follows the record of the proceedings in THE JOURNAL, will find himself well abreast of the progress of the day. Especially familiar with the programs of these meetings for more than twenty-five years I, for one, am proud of them. More than this, the opportunity to meet one's fellows from all over the country is invaluable.

In the local and state branches of the Association it is possible always to arrange for more of those clinical lectures and demonstrations which have lately become so popular. If one can afford to give the time necessary to attend a variety of special society meetings it may be much to his advantage, but I have always felt, and I feel today more strongly than ever, that whatever one's attachment may be to the special organizations or clubs to which he may belong, whatever benefit he may gain from them, this body is the most valuable, the most important of all; it is the organization to which he owes his first and undivided devotion. It is the organization through which he can help more effectively "to promote the science and art of medicine and the betterment of public health," those objects which are our common aim. Through loyalty to this association, the physician can best do his duty to the public.

V 90
1928

It is a strange and paradoxical situation that the traveling expenses of physicians who attend these gatherings should be subject to the federal income tax, while those of the members of other professions attending like meetings should be exempted. It can scarcely be said that the educational and other advantages gained by the members of sister professions at like reunions are greater than in the case of physicians. It can hardly be that this apparent discrimination against the medical profession is intentional or that it can endure. It is difficult to see why Congress should be deaf to our representations in this matter.

May I, in closing, congratulate this body on its wisdom in establishing the Council on Physical Therapy, a subject which in the past has been rather neglected, in English-speaking countries at least. The subject of physical therapy I believe to be of an importance far greater than has been generally recognized.

I feel somehow that I should not sit down without saying a word about two remarkable men who have left us.

Peabody, professor of medicine at Harvard, who was a member of the Council on Pharmacy and Chemistry, had impressed himself on his friends as more than a physician of distinction and promise: an able teacher and a profound student. His was a rare and unusual beauty of character which touched and uplifted all who came under his influence. He was one of ours, and we honor and treasure his memory.

The obituary notices of Hideyo Noguchi speak of him as a great Japanese physician. But though Noguchi was not an American citizen, he, too, in many ways was our own.

For more than five and twenty years he lived and worked in our midst, industriously pursuing those brilliant and beneficient researches which have made his name famous. His acute mind, his untiring energy, his modest and unassuming character made him the model of a scientific investigator.

Yesterday, in Africa, he gave his life to the cause of humanity, as simply, as directly, as courageously as on the field of battle.

To us among whom he worked he brought high honor. In him we felt great pride. For him those so fortunate as to know him felt sincere affection. I am sure I speak for the medical profession of America when I express to our colleagues of Japan our profound sympathy in the loss of a great and noble figure, and when furthermore I beg to assure them of our deep sense of the privilege which is ours of sharing something of the pride in his great achievement and his heroic career, which is the heritage of his mother country. (Applause.)

## REPORTS OF OFFICERS

### Report of Secretary

The annual report of the Secretary was presented as published in THE JOURNAL, May 5, p. 1445. The report was referred to the Reference Committee on Reports of Officers, excepting that portion of the report that deals with the questions of amendments to the Constitution and By-Laws, which was referred to the Reference Committee on Constitution and By-Laws.

### Report of the Board of Trustees

The report of the Board of Trustees was presented by the Secretary of the Board, Dr. J. H. Walsh, as published in THE JOURNAL, May 5, p. 1447, and was referred to the Reference Committee on the report of the Board of Trustees.

### Report of Judicial Council

The report of the Judicial Council was presented by Dr. M. L. Harris, Illinois, chairman, as published in THE JOURNAL, May 5, p. 1469. The report was referred to the Reference Committee on Reports of Officers, except that portion referring to amendments to the Constitution and By-Laws, which was referred to the Reference Committee on Amendments to Constitution and By-Laws.

### Report of the Council on Medical Education and Hospitals

Dr. Arthur D. Bevan read the report of the Council on Medical Education and Hospitals as published in THE JOURNAL, May 5, p. 1472.

### Supplementary Report of Council on Medical Education and Hospitals *

Dr. Bevan also read the following supplementary report, which was referred to the Reference Committee on Medical Education.

In addition to presenting the report of the Council on Medical Education and Hospitals, a copy of which you have before you, I desire to emphasize several matters of importance in the future development of this work.

First, the study, the investigation, the classification of hospitals has become one of the most important, possibly the most important matter before the American Medical Association today. Hospital facilities and hospital care have become absolute necessities in the practice of modern scientific medicine. Both the medical profession and the public recognize this fact. The result is shown in the building of hospitals everywhere throughout the United States, even in comparatively small communities. The number of hospitals in this country is rapidly increasing. We have now more than seven thousand hospitals, and each year shows a large increase. A well organized and well conducted hospital improves greatly the character of medical service in a community.

Both the profession and the people have shown an admirable spirit in their effort to secure and improve proper hospital service and they are both eager to obtain all the light and advice possible which will enable them to conduct their hospitals properly. They look to the American Medical Association for such advice and assistance.

The hospital problem is a very large one. The Council has been studying it with much care and has felt that this very large and very complex subject should be handled very carefully and very patiently with the purpose of giving assistance and advice rather than for the purpose of criticism. For several years the hospital work of the Council was limited to a general survey and the publication of a list of hospitals approved for interns and residents. It has became more and more evident that the medical profession of the country looks to the organized profession of the country, the American Medical Association, for guidance in this matter, and, under instruction from the Association and with appropriations made by the Board of Trustees, the Council is developing a hospital register. You will find in the last hospital number, which has been distributed to each delegate, the first hospital register. The American Medical Association is well organized to create such a register of hospitals just as it is to create a register of the physicians of the country.

We have already organized a trained personnel at the headquarters of the American Medical Association who are devoting their entire time to this hospital problem and we are adding to this force from time to time. This hospital problem is so large and varied in different localities that it is necessary to call in the assistance of local state committees who can with their knowlege of local conditions be of great service. This work must be done by the close cooperation between the American Medical Association and the state medical societies and the state authorities.

We are not prepared to publish a classified list of hospitals as we have done with the medical schools. There can be no doubt, however, but that the publication of a simple and accurate and reasonable classification of hospitals would be of great service in stimulating the hospitals to do better work and would in that way secure better medical service for the people of this country, which is the fundamental purpose of organized medicine. This hospital program should be vigorously carried on.

In the second place, I desire to state that the medical school situation is rapidly improving. At the last annual conference in Chicago, I presented a résumé of the changes that have occurred in medical education in this country in the last twenty-five years (a copy of which has been distributed to each delegate). This wonderful improvement, the greatest that has occurred in any

* EDITORIAL NOTE.—Dr. Arthur Dean Bevan, subsequent to the publication of the report of the Council on Medical Education and Hospitals (THE JOURNAL, May 5, pages 1472-1475), prepared this supplementary report.

field of education during this period, has been due primarily to the American Medical Association. Great credit is due, however, to the fine cooperation furnished by the state licensing boards, the Association of Medical Colleges, the medical colleges themselves and the universities of the country, and the great educational foundations, especially the Rockefeller Foundation and the Carnegie Foundation.

There is still much to be done in this field; there always will be. There is, however, a certain imperative job which should be done at once and I desire to call the attention of the House of Delegates to the state board number of THE JOURNAL, which has been distributed to you. On page 1206 you will find the list of the medical schools which are recognized by the state licensing boards. Although there have been great improvements in medical education, there are still nine schools which are not recognized by certain state boards.

I desire to call the attention of the delegates from the following states to the fact that their state still has a medical school, or schools, which are not recognized by the state licensing boards of from forty-seven to fifty out of a total of fifty states:

1. Illinois, with one.
2. Missouri, with three.
3. Massachusetts, with two.

In the name of the American Medical Association, I would urge that these states, through the state medical societies and state licensing boards, take such steps as are necessary either to reorganize these schools into acceptable schools or to eliminate them. There are three other schools: one in Ohio, not recognized by sixteen boards; one in Pennsylvania, not recognized by twenty-five; and one in New York, not recognized by twenty boards.

In the third place, I desire to call your attention to a matter which must be faced and acted on. I refer to the matter of institutions practicing medicine. The right to practice medicine lies in the individual who has devoted years to the study of medicine. The practice of medicine is a business not open to all but is a personal right limited to persons of good moral character with special qualifications ascertained and certified after a long course of study, both general and professional, and a thorough examination by a state board appointed for the purpose. A corporation does not possess such qualifications; it cannot ethically, and it should not be able legally to practice medicine. The individual who is qualified to practice medicine makes a contract with the patients who consult him, and, although this contract is not written, it is as binding. He agrees to give to his patients his best skill and judgment, due diligence in their case and the benefit of the knowledge possessed by the professors of the art at the time and in the place where the services are rendered. If he fails to give his patient such service he can be sued for malpractice and can be made to pay damages. If his patient does not pay for his services, he can sue in court and collect for them by process of law. These individual and personal relations of the doctor to his patient cannot be assured by an institution. A corporation cannot legally practice medicine.

There are many phases to this situation. I shall, however, limit my statement to the one which interests us from the standpoint of medical education. I refer specifically to the organization of certain university medical schools and hospitals on the so-called full-time clinical basis: the placing of clinical teachers on salaries, allowing them to take care of pay patients, but only on the condition that the fees for such services are paid, not to the medical man, but to the institution. This so-called full-time clinical teacher is an American experiment which did not originate in the medical profession but in the minds of laboratory workers and laymen. It has never had the support of the medical profession. It has gone far because it has received ample financial support. The universities which have adopted this plan have been badly advised in this matter and the time has come when the medical profession should take a definite stand on this subject and make it clear to such institutions that an institution cannot practice medicine and that medical education must be developed on sound ethical lines that can receive the support of the medical profession. There is already danger of the development of a line of cleavage, of a schism, between the medical profession and the universities with full-time medical faculties, which would be unfortunate.

The logical and ethical solution of this matter is very simple. The teacher of clinical medicine in any field should be, first and foremost, a great clinician. It goes without saying that he must be a successful teacher and profoundly interested in advancing knowledge; but his function in life is that of a great clinician, a great authority in his special clinical field. He must be a great consultant and his services should be at the disposal of the medical profession and the public. He should, of course, not be in the ordinary practice of medicine, spending his entire day in house to house calls and office work, but he should be in active consulting practice. He should be prepared to solve the difficult clinical problems referred to him and for these services he should receive from such patients proper compensation. When a well-to-do patient receives medical services from a medical man he should pay a proper fee for such services and this fee should go to the medical man rendering such personal and individual services and not to an institution. The organized medical profession of this country, the American Medical Association, should make it clear from the standpoint, not only of medical ethics but from the broader standpoint of general ethics, that it regards the payment of a fee for medical services to an institution, instead of to the medical man rendering such service, as unethical and wrong. Such an arrangement cannot be accepted by the organized medical profession. The organized legal profession is definitely on record in this matter and is opposed to an institution practicing law.

The experiment of full-time clinical teachers has been given a fair trial and has proved to be a failure. It is impossible to secure and retain permanently first-class men on this unethical basis. Very few of the men who have been tempted by the offer of an important professorship, and accepted it, believe in the plan or retain these positions for long.

I desire to call your attention the letter of Francis Peabody, published in THE JOURNAL of April 14, and the article of Theodore C. Janeway, published in THE JOURNAL of April 21, as evidence of this fact. The experience of the medical educators of the world has gradually crystallized in a scheme of organization of teachers in clinical departments which can be safely adopted. It is that of placing the clinical teacher in the same position as other university teachers, giving him the same salary and expecting him to make his university position his life's work, his first consideration. He should devote as much time to his position as do other university professors; but the university should also expect him to be a recognized authority in his special field. The university should recognize the fact that the practice of medicine is an essential part of the teaching of clinical medicine, that such practice is a part of his duties, a part of his education, and a part of his clinical research work; and for such service he, and he alone, should receive the proper compensation from the patients who are able to pay for medical services. There should be no interference with his liberty of action. He must not, of course, permit anything to interfere with the full performance of his university work. Any professor in any department who does this can be easily and properly eliminated.

The medical profession should do as the legal profession has done: place itself on record against an institution practicing medicine. I believe that steps should be taken by the American Medical Association to initiate this movement. The legal profession has now in the supreme court of the state of Illinois a case testing the legality or illegality of an institution practicing law. If the legal profession wins this case it will be a valuable precedent. The medical profession, which, I believe, has even a stronger case than the legal profession, should employ able counsel and carry this matter up to the supreme court of some state for a definite and final settlement.

And finally, Mr. Chairman and members of the House of Delegates, I desire to express to you my great appreciation of the valuable and unselfish services rendered by the members of the Council on Medical Education and Hospitals, and by Dr. Colwell, our secretary, who has devoted his life to this work and who is very largely responsible for the splendid showing which has been made. You will find on page 137 that the report of the Council is signed by the chairman and by Surg. Gen. Merritte W. Ireland, U. S. Army; Louis W. Wilson, Minnesota; Walter F. Donaldson, Pennsylvania; President Ray

V 90
192

Lyman Wilbur, California; Samuel W. Welch, Alabama; Emmett P. North, Missouri, and N. P. Colwell, secretary, Illinois. I desire to state that each and every one of these men has rendered great and valuable service in this work. They have devoted years of study and service to this great educational movement and are entitled to our appreciation and gratitude. The strength of the Council has been largely in the fact that it has been entirely free from political pressure of any kind and that the tenure of office has been in most instances at least five years, a period long enough to enable the members of the Council to become very familiar with the work and their own duties. I believe, therefore, that it would be a serious mistake to make a change in the method of appointing the members of the Council and of shortening their terms of service.

### Report of Council on Scientific Assembly

Dr. J. Shelton Horsley, Virginia, Chairman of the Council on Scientific Assembly, presented the report, as published in THE JOURNAL, May 5, p. 1475. The report was referred to the Reference Committee on Sections and Section Work except that portion pertaining to amendments to the Constitution and By-Laws, which was referred to the Reference Committee on Constitution and By-Laws.

The speaker called attention to the report of the Advisory Committee on Trachoma Among the Indians (THE JOURNAL, May 5, p. 1476) and also the report of the Committee on the Grading of Nursing Schools (THE JOURNAL, May 5, p. 1477). Without reading, these reports were referred to the Reference Committee on the Report of the Board of Trustees, as the committees are subcommittees of the Board of Trustees.

### Report of American Red Cross Disaster Relief Committee

Dr. William Allen Pusey, Illinois, read the report of the American Red Cross Disaster Relief Committee, which was referred to the Reference Committee on Hygiene and Public Health.

### Report of Delegate to Meeting of Mexican Medical Association

Dr. J. O. McReynolds, Texas, presented the following report, which was referred to the Reference Committee on Miscellaneous Business.

As your representative at the Eighth National Medical Congress of Mexico at Monterey in December, 1927, I beg to submit a brief report of my stewardship. I was received with every courtesy and distinction befitting the representative of the greatest medical organization of the world. I was asked to preside at some of the general sessions, and the happy relationships between the scientific men of these two republics were emphasized, and the deepest appreciation was expressed of the cordial spirit manifested by this important interchange of friendly greetings. Your representative was honored by the kind and sympathetic reception of his contributions to the scientific session.

I was pleased to note the scholarly and finished character of the various papers presented and the illuminating anatomic and pathologic exhibits abundantly provided and attractively arranged for purposes of study and investigation.

I found on every hand that the faithful and diligent members of our profession in that distracted land were moving forward with patient, firm and consecrated resignation to their fate and in behalf of the unfortunate people of that marvelous country.

It was a picture that stirred the warmest impulses of fraternal pride and affected the imperishable sublimity of faith in our common cause. I rejoiced at the opportunity of assuring our comrades that the high ideals of American medicine and American citizenship responded with genuine interest to the splendid heroism of our brethren beyond the waters of the Rio Grande. I esteemed it a high privilege to be your servant and ambassador of good will to the struggling men of science in our sister republic south of us. It would seem to be a natural and a helpful policy of this great American association of forward-looking men to send to other Latin-American republics a similar message of hope and confidence of cordial fellowship.

I am grateful to you for this opportunity of service, and I believe that your generous action will not dim the luster of your achievements, but will only add just another reflection in the hearts of real men in all parts of the world. (Applause.)

### Report of the Special Committee to Cooperate with the Commissioner of Internal Revenue and the Secretary of the Treasury

Dr. W. H. Mayer, Pennsylvania, presented the following report, which was referred to the Reference Committee on Legislation and Public Relations:

The House of Delegates, at the Washington Session, 1927, directed the special committee appointed to cooperate with the Secretary of the Treasury and the Commissioner of Prohibition, the Secretary of the Bureau of Legal Medicine and Legislation, and the Board of Trustees, to prepare a bill "correcting the unfortunate provision of the Volstead Act limiting the amount of alcohol used and providing such regulations as will permit doctors to prescribe whatever amounts of alcoholic liquors may be needed for their respective patients, and subject to such reasonable restrictions as may be thought wise and best after a conference with the head of the Prohibition Department." On the completion of the bill, it was to be presented to Congress. (Proceedings, House of Delegates, 1927 pp. 57-58.)

The chairman of the Committee and the secretary of the Bureau of Legal Medicine and Legislation conferred with the Secretary of the Treasury, the Assistant Secretary of the Treasury in charge of the Bureau of Prohibition, and the Commissioner of Prohibition, in the hope of learning their views as to what would constitute reasonable restrictions to prevent the diversion of medicinal liquor to beverage purposes if physicians should be granted the right to administer and prescribe liquor without limitation as to kind and quantity. The Secretary of the Treasury and the Assistant Secretary were courteously noncommital. The Commissioner of Prohibition disclaimed any intention of speaking for the Secretary of the Treasury, but he suggested that the limitations that had been previously proposed by the committee and acquiesced in by the then assistant secretary in charge of the Bureau of Prohibition, General Lincoln C. Andrews, might possibly still be regarded as reasonable. For himself, however, he expressed the opinion that the restrictions therein proposed might be construed to be more rigid than restrictions in existing law. The restrictions referred to are those that were embodied in the report of the committee made to the House of Delegates at its session in Dallas, 1926, and need not be restated here. (Proceedings, House of Delegates, 1926, pp. 23-34.) It is sufficient to say that the House, having such proposed restrictions before it, neither approved nor disapproved them, but recommended merely that the committee be continued. (Ibid.) The conference with the officers charged with the administration of the National Prohibition Act yielded nothing.

The committee thereupon sought to learn what a group of representative physicians throughout the country thought would be acceptable to the medical profession as "reasonable restrictions." A letter asking for a statement of such restrictions was addressed to one leader in the medical profession in each state and other jurisdictions within the United States. Replies were received from twenty-three such physicians. Constructive suggestions were offered in two cases, both writers proposing that some local officer be empowered to authorize on application, in individual cases, the attending physician to prescribe in such cases quantities of liquor in excess of those now authorized by law.

Although your committee has given diligent and serious thought to the problem set by the House of Delegates, it has been unable to find any solution. It frankly confesses that it has been unable to do what neither the federal authorities charged with the enforcement of the National Prohibition Act nor fifty-four representative physicians scattered throughout the United States could do, namely, to determine what constitutes "reasonable restrictions" that will effectively prevent the diversion of medicinal liquor to beverage purposes if the right of administering and prescribing liquor without restriction as to kind and quantity be by law made available on application to the 130,000 physicians practicing in the United States and to such osteopaths and others as under the laws of their respective states are entitled to prescribe liquor. For the reasons stated, the committee has been unable to perfect the bill that it was

directed to prepare, because it has been unable to formulate restrictions that it could propose with a reasonable hope that they would be accepted by the Secretary of the Treasury, the Commissioner of Prohibition, and Congress, or by even a majority of the medical profession, as being effective to accomplish the end for which they were formulated and at the same time reasonable from the standpoint of the practitioner. Your committee has been unable, therefore, to submit to the Board of Trustees, with a view to endorsement by it and introduction into Congress, the draft of such a bill as it was directed to prepare.

The committee has deemed it its duty, therefore, to report the matter back to the House of Delegates with the request that the House state its views as to what constitutes reasonable regulations for the purpose named.

### Address of Dr. G. Lenthal Cheatle, Delegate of British Medical Association

The Secretary presented the official delegate of the British Medical Association, Sir G. Lenthal Cheatle, who spoke as follows:

When I received Dr. West's kind invitation to be your guest at this meeting of the American Medical Association, I accepted it with alacrity. All my life I have been engaged in laboratory work, and I have paid little attention to the proceedings of our association or any other medical association.

Although I have been engaged chiefly in laboratory work, I do realize that in my professional life the American medical profession has risen to a power in America in the conduct of affairs relating to public health.

Gentlemen, I don't know, I may be talking nonsense, but it seems to me that the governments of all these different countries, yours and my own, cannot get on in questions of public health without most authoritative advice and guidance from the medical profession.

In England there is no body of men that can speak with authority and give the opinion of first class medical authorities on any of these questions. Anybody who writes is only giving his own opinions; he may be a very good man, and they may be good opinions, but they are not the cumulative opinions of the medical profession. I want to know particularly how far the American Medical Association can be considered to be advisory to the American government.

Dr. Cox, who made a great point of seeing me before I came to see you, sent his greetings to the American Medical Association. He knows a great deal of what I think should be the relation between medicine and government, and he particularly asked me not to say what my opinions were on this matter. Probably in private conversation with some of you gentlemen I may be tempted to say what I really think about it. I don't think that we should be doing much good in influencing the government in the treatment of public health, if the British Medical Association or the American Medical Association only talk about it themselves and have no power to enforce upon the governments of these different countries what they really think should be done in various matters which they discuss among themselves.

I was interested to hear some report of what the lawyers are doing in your country. The lawyers in my country are all powerful.

Medicine has only recently risen to a position in which power can be asserted, and I think it is high time that the opinions of the medical profession should have some more authoritative influence than they have in the world at the present time.

I should like to thank you very much for asking me to be your guest, and I hope I shall prove to you to be a satisfactory one. (Applause.)

*(To be continued)*

---

**Speed and Accuracy in Learning.**—The reason that our children work so slowly is because we try to make them work so fast. If emphasis is put on accuracy and the learner has a comfortable atmosphere in which to work, speed is sure to follow. Then why all this human torture to the school child only to produce inferior learning products?—Myers, G. C.: *Ment. Hyg.* **12**:23 (Jan.) 1928.

# Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST: SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION, PUBLIC HEALTH, ETC.)

## CALIFORNIA

**Dr. Lorini Resigns.**—After twenty-seven years of service as city health officer of Coronado, Dr. Raffaele Lorini has resigned. Dr. Charles W. Lane is now acting health officer, pending the reorganization of the board of health.

**Hospital News.**—The Sisters of St. Joseph of Orange are to construct a new 100 bed hospital at Orange in two four story units one of which will be a home and school for nurses. The hospital is to be of reenforced concrete in mission style and a duplicate on a small scale of the new hospital dedicated by the sisters recently at San Francisco.

**Medical Golf Tournament.**—A committee of the state medical society conducted a golf tournament at the Del Paso Country Club, Sacramento, during the annual meeting, May 1. More than eighty physicians teed off, five of whom finished with scores in the eighties and twenty-nine with scores under 100. The winners were Dr. George McClure, Oakland (low gross, 80-10-70), and Dr. Ernest A. Daus, Vallejo (low net, 80-13-68). The high gross score (182) was made by Dr. Maurice Heppner, San Francisco; Dr. Gustave Wilson, Sacramento, was chairman of the committee of arrangements.

**Society News.**—The top floor of the home of the San Francisco County Medical Society, 2180 Washington Street, has been rented to fifteen members of Omega Upsilon Phi for living quarters, a very satisfactory arrangement having been made between the fraternity and the committee of the medical society. The board of directors has decided to leave the home open for members in the evening on week days, until 9:30, so that they may use the library or just drop in for a chat.—— Dr. Frederick M. McPhedran, Philadelphia, will address the San Diego Academy of Medicine at Mercy Hospital, June 28, on chest diseases.

**State Medical Election.**—At the annual meeting of the California Medical Association, Sacramento, May 2, Dr. William H. Kiger, Los Angeles, was installed as president; Dr. Morton R. Gibbons, San Francisco, was made president-elect, Dr. Edward M. Pallette, Los Angeles, vice president, and Dr. Thomas Henshaw Kelly, San Francisco, was elected to the council to fill the unexpired term of Dr. Gibbons. Drs. Robert A. Peers, Colfax, William Duffield, Los Angeles, Fred R. De Lappe, Modesto, and Junius B. Harris, Sacramento, were elected councilors to succeed themselves. The next annual meeting will be at Coronado, May 6-9, 1929.

## COLORADO

**Society News.**—The Weld County Medical Society was addressed, May 7, by Dr. Emanuel Friedman, Denver, on obscure fevers of childhood, and by Dr. Harry L. Baum, Denver, on infections of the nasal sinuses.——Dr. Joseph Boch, assistant superintendent, National Jewish Hospital for Consumptives, Denver, has been appointed medical director and superintendent of the Ex-Patient Tubercular Home at Denver.

**American Association for the Study of Goiter.**—The annual meeting of this association will be at Denver, June 18-20, with headquarters at the Cosmopolitan Hotel. The scientific sessions will be at Medical Hall, 1620 Court Place. Physicians, generally, are invited. Among others, Prof. Albert Kocher, Berne, Switzerland, will give an address on "Preoperative and Postoperative Treatment of Goiter"; Prof. B. Breitner, Vienna, Austria, on "The Iodine Question in Animal Experiments"; Dr. Henry S. Plummer, Rochester, Minn., "Adenomatous Goiter"; Drs. Warren H. Cole, Nathan A. Womack and S. Gray, St. Louis, "The Thyroid in Systemic Infections: Pathologic Changes in Animal and Human Glands"; Drs. Willard O. and P. Thompson, Boston, "Significance of Low Metabolism Following Thyrotoxicosis"; Dr. James Tate Mason, Seattle, "Preoperative Treatment of Exophthalmic Goiter." There will be diagnostic clinics, Monday morning by Drs. Plummer and Samuel F. Haines, Rochester, Minn., and by Dr. William D. Haggard, Nashville, Tenn., and operative clinics, Tuesday morning, at several hospitals. At the banquet, Tuesday evening, at the Denver Club, a report of the Berne Conference will be made; ladies are invited. A trip through

V 90
1928

the Denver mountain parks will be made, Wednesday afternoon. The secretary of the association is Dr. Kerwin W. Kinard, Kansas City, Mo.

## ILLINOIS

**Society News.**—Drs. Edwin P. Sloan and Guy A. Sloan, Bloomington, were guests of the St. Clair County Medical Society, June 5; the latter read a paper on "A New Upper Abdominal Incision," illustrated with lantern slides.

**Adams County's Annual Picnic.** — The Adams County Medical Society will hold its annual picnic in conjunction with the Sixth Councilor District Medical Society, June 20, at Martindale on the Mississippi River, a few miles south of Quincy. The society has invited all physicians in the Quincy territory to be their guests on this occasion. Among the speakers will be the president of the state medical society, Dr. John E. Tuite, Rockford; the president-elect, Dr. Frederick O. Frederickson, Chicago; the secretary, Dr. Harold M. Camp, Monmouth; chairman of the council, Dr. William D. Chapman, Silvis; the chairman of the legislative committee, Dr. John R. Neal, Springfield, and the councilor of the sixth district, Dr. Charles D. Center, Quincy.

**Smithton Honors Its Only Physician.**—Almost the entire population of Smithton turned out to honor its only physician and former mayor, Dr. Gustavus G. Bock, May 27, on the occasion of his seventieth birthday and the forty-fourth anniversary of his marriage. The celebration marked an epoch in the history of the village, according to the Belleville *Advocate*. Preparations went forward quietly for several weeks. The ceremony opened with speeches and songs by local talent and ended with a luncheon prepared by the women of the village Township Supervisor Joseph Miller, who presided, reviewed briefly the life of Dr. Bock and commended him for his work for the community. Dr. Bock came to Smithton in 1878 with his father, who was a practicing physician at that time, and after graduating from Washington University Medical School, St. Louis, practiced with his father. He was the mayor of Smithton for about twenty-five years, and is credited with having had built the first concrete bridge in that part of the county.

### Chicago

**Society News.** — The Chicago Gynecological Society will meet, June 22, at the Murphy Memorial Building, 50 East Erie Street; Dr. Gustav Kolischer will read a paper on "Modern Conceptions of Renal Derangements in Pregnancy"; Dr. Samuel J. Fogelson on "Gallbladder Stasis as Determined by Cholecystography in Pregnancy," and Dr. Edward L. Cornell on blood pressure readings of pregnant women.

**Hospital News.**—The Women's and Children's Hospital of Chicago, which is erecting a new building at Ashland Boulevard and Maypole Street, laid the cornerstone, June 14. Among the speakers were Maud Slye, University of Chicago; Dr. William A. Evans, Northwestern University Medical School; Dr. Clara Ferguson of the hospital staff; Rabbi Louis I. Mann; Father Frederic C. Seidenberg of Loyola University; Carter Harrison, and Judge Mary Bartelme; Mrs. Charles Moody, president of the board of directors of the hospital, presided. This, the second oldest hospital in the city, is at present at 1712 West Adams Street.——The remodeled People's Hospital, which was moved for the widening of Twenty-Second Street, recently, was opened, June 10, at 255-261 West Twenty-Second Street.——Ground was broken, June 12, for the new $1,000,000 Bobs Roberts Memorial for Children for the University of Chicago, Fifty-Ninth Street and Drexel Avenue.

## INDIANA

**Past Presidents Awarded Certificates.** — At the annual dinner and dance of the Indianapolis Medical Society, May 24, eighteen past presidents of the society were awarded certificates. They were:

| | |
|---|---|
| Dr. William N. Wishard | Dr. Charles F. Neu |
| Dr. Hugo O. Pantzer | Dr. James H. Taylor |
| Dr. Samuel E. Earp | Dr. Amos L. Wilson |
| Dr. Harry E. Gabe | Dr. John W. Sluss |
| Dr. Charles E. Ferguson | Dr. Lafayette Page |
| Dr. David Ross | Dr. John F. Barnhill |
| Dr. Alois B. Graham | Dr. Joseph R. Eastman |
| Dr. Thomas B. Noble | Dr. Alfred S. Jaeger |
| Dr. Norman E. Jobes | Dr. Homer G. Hamer |

**Smallpox Stops Sunday Ball Game.**—One effect of the ban on public gatherings at Shoals, because of the presence of smallpox in the community, was to stop a Sunday baseball game, May 27, between the Shoals Greys and the Burns City team. The Shoals *News* hastens to say that the ban will not further affect the local team for at least two weeks hence, as the next two games are scheduled to be played away from home.

## MARYLAND

**Hospital News.** — The addition to Eudowood Sanatorium made possible by a gift from Mrs. Mary Frick Jacobs was dedicated, June 2. The unit will house forty tuberculous children and is a testimonial from Mrs. Jacobs to her husband, Dr. Henry B. Jacobs, president of the board of directors of the institution. It is a frame structure built to resemble a sun parlor. There is a reception room on the first floor and a school room on the second. The play room in the basement is level with the ground. There are four wards besides the isolation room. Mrs. Jacobs also provided the equipment.

**Changes in Health Department.**—Dr. Paul Preble, who has been loaned to the state department of health by the U. S. Public Health Service and has been acting as temporary head of the bureau of vital statistics, has been relieved of that work and will make a study of the bureaus of the department and recommendations for improvement to the state board of health. Dr. John Collinson has been made acting head of the bureau of vital statistics. There are, therefore, two vacancies, one made by the promotion of Dr. Robert H. Riley to be director of the department, and the other by the promotion of Dr. Collinson. The department will soon move from its present quarters to Charles and Twenty-Fourth streets, Baltimore.

## MASSACHUSETTS

**Health at Lowell.** — Telegraphic reports to the U. S. Department of Commerce from sixty-seven cities with a total population of about 30 million, for the week ending May 26, indicate that the highest mortality rate (20.9) was for Lowell, and that the mortality rate for the group of cities as a whole was 13.9. The mortality rate for Lowell for the corresponding week last year was 12.3, and for the group of cities, 12.5.

**Society News.** — The Massachusetts Society for Social Hygiene has been reorganized with Dr. Cecil K. Drinker, Boston, president, and Dr. Helen I. D. McGillicuddy, Boston, executive secretary. The society plans to make an investigation and campaign against venereal disease in a single community in the state rather than to diffuse its effort through many cities; to cooperate with the state-aided venereal disease clinics, and to continue educational work.

## MICHIGAN

**Personal Interview Reduces Applicants.**—The dean of the University of Michigan Medical School, Ann Arbor, is reported to have said that the new requirements for admission to the medical school (THE JOURNAL, Dec. 24, 1927) have reduced the number of applicants nearly 60 per cent. Whereas almost 1,000 students applied for admission to the medical school last year, the total this year is about 400, of whom only about 200 can be accommodated. Applicants for admission now are required to have a personal interview with a committee of the faculty or representative of the school before they are accepted. Admission is based on the applicant's record, his general intelligence and on the impression made in the interview.

**Epidemic of Ringworm of the Feet.**—Ringworm of the feet and plantar warts have become common in the schools of Detroit and vicinity. In one school from 5 to 20 per cent of all classes using the pool were infected. This condition is limited almost entirely to those schools where showers and pools are used, and it arose in spite of careful attention to the sanitation of the baths and to the bacterial count of the pool water. The director of the school health service of the Detroit Department of Health, Dr. Don W. Gudakunst, states that in schools where a sudden outbreak has occurred, the practice has been to scrub the floors of the shower rooms and all places where a child may walk barefooted with either formaldehyde or bichloride of mercury solution, and in one school formaldehyde footbaths were used at the entrance and exit of the shower room with apparent success of preventing further spread of the infection. All principals of Detroit schools have been directed to lend every effort in improving this condition.

## NEW YORK

**Personal.**—Dr. Edward W. Koch has been made acting dean of the University of Buffalo School of Medicine. Dr. Koch has been secretary of the medical faculty and head of the department of pharmacology for several years.

**Bogus Doctor Goes to Sing Sing.**—Following his conviction by a jury for manslaughter, Emil J. Tiedeman of Ozone Park was sentenced by County Judge McLaughlin to Sing Sing for from five to fifteen years. Tiedeman, an alleged physician who practiced without a license, was charged with having performed an illegal operation; the patient died.

**Rensselaer County Has Record Meeting.**—The regular meeting of the Rensselaer County Medical Society, Troy, May 8, made a record for attendance with 264 physicians. There were 115 of the 130 members of the society present, the remainder of the audience being from within a radius of 80 miles from Troy. The address of the evening was by Dr. Frank H. Lahey, Boston, on "Gastric and Duodenal Ulcers"; he spoke one hundred and five minutes and, according to the secretary, Dr. Douglas A. Calhoun, the audience wanted more. Dr. James E. Sadlier, Poughkeepsie, then president of the state society, gave a short talk. Dr. John J. Rainey, president of the county society, presided.

**Hospital News.**—The St. Lawrence State Hospital, Ogdensburg, April 11, opened a new department known as the "beauty parlor," which not only is to be a means of improving the appearance of the hospital population but a factor in the treatment of patients.——At the eighth annual graduation exercises for physicians, nurses, dentists and dietitians at the Buffalo City Hospital, Buffalo, June 7-8, Dr. Joseph C. Doane, Philadelphia, president of the American Hospital Association, and Dr. Harry R. Trick, Buffalo, president, New York State Medical Association, were the principal speakers. Dr. Willam Magner of the University of Toronto Faculty of Medicine conducted a medical conference for the house medical staff; Dr. John J. Morton, Jr., of the University of Rochester School of Medicine, a surgical conference; Dr. Doane, a hospital conference for the hospital executives of Western New York, and Clifford E. Rose, D.D.S., University of Buffalo, a dental conference.

## New York City

**Society News.**—The campaign for a building fund for Queens County Medical Society had reached $100,000, June 4, when the society and the Medical Association of the Greater City of New York held a joint dinner at the St. Albans Golf Club. The Queens County society plans to erect a four story building on Queens Boulevard near Seminole Avenue and is raising $250,000 for that purpose. The society was organized in 1806, and is one of the oldest medical societies in the United States.——The class of 1898 of the College of Physicians and Surgeons of Columbia University held its thirty year reunion, June 7; forty members were present.——At the annual meeting of the Harvey Society, May 16, Dr. Francis Peyton Rous of the Rockefeller Institute for Medical Research was elected president; Dr. Horatio B. Williams, professor of physiology, Columbia University College of Physicians and Surgeons, vice president, and Dr. Philip D. McMaster, Rockefeller Institute for Medical Research, secretary.

**Personal.**—Dr. Harry O. Zamkin has been appointed assistant pediatrician at Mount Sinai Hospital.——The emperor of Japan has conferred the Imperial Order of the Second Class of the Rising Sun on Dr. Hideyo Noguchi, who died of yellow fever at Akkra on the Gold Coast of Africa, May 21.——Dr. Miguel Steinberg has been appointed lecturer in neurology at the New York Polyclinic Medical School and Hospital and attending neurologist at the University and Bellevue Hospital Medical College.——Dr. Ben Henry Rose has been apnointed associate adjunct gynecologist and obstetrician to the Bronx Maternity Hospital.——Dr. G. Canby Robinson, director of the medical center to be erected by Cornell University and New York Hospital, received the honorary degree of LL.D. from Washington University, St. Louis, June 5, in recognition of his services to the university and of his contributions to medicine.——Dr. Jacob Buckstein has been appointed consultant in gastro-enterology to the Central Islip Hospital.

**Cleanliness of the Sidewalks of New York.**—A subcommittee of the public health relations committee of the New York Academy of Medicine, in a report on the subject of clean streets, says that in the last ten years there has not been any material change in the cleanliness of the streets of New York and that for many years the streets have not been cleaned satisfactorily. The sidewalks are not as clean as they were years ago when the private house owner took pride in keeping his sidewalks scrupulously clean; the road ways may be cleaner but the sidewalks are dirtier than they ever were. The neglected condition of the streets is considered a menace to public health, as the dust carries the organisms of various diseases, while, in the piles of garbage, flies breed which may carry disease. According to the New York *Times*, New York, except in favored localities, when compared with Havana, is ill kept and dirty. The subcommittee realizes the difficulties involved in the cleaning of streets but insists they must be met and that they can be with the cooperation of the public and of the municipal departments responsible. It recommends that a definite system of street cleaning be adopted, after consultation with experts, and that dry cleaning be abandoned, except, possibly, when the temperature is near freezing. From the medical point of view, the subcommittee says, the proper method is to flush the streets liberally and to follow this up almost immediately by cleaning the surface with brooms or scrapers. The executive secretary of the committee on public health relations, E. H. Lewinski-Corwin, Ph.D., estimates that the refuse requiring removal amounts in a year to 2,695,000 tons of ashes, 440,000 tons of garbage and dead animals, 300,000 tons of street sweepings and 270,000 tons of rubbish. The committee on public relations of the academy of medicine is composed of many able physicians who have studied this problem for many years. The subcommittee, which submitted the preliminary report, comprises Drs. Bernard Sachs, George Baehr, Robert J. Carlisle, John E. Jennings and Walter E. Lambert.

**Status of Medical Center—Another Unit Opens.**—The Sloane Hospital for Women began to operate at the new medical center at One Hundred and Sixty-Eighth Street and Broadway, June 6, where it occupies the thirteenth, fourteenth and fifteenth floors of the Presbyterian Hospital; one floor will be devoted exclusively to operations. The ninth floor of the Harkness Pavilion for Private Patients will be for the private cases of Sloane Hospital; here each baby will have its own tiny room, as each crib is partitioned off. The Sloane Hospital will continue to cooperate with the College of Physicians and Surgeons and the Vanderbilt Clinic. There will be separate units specially designed for toxic patients. The infective unit will have its own nurseries and there will be separate administrative offices, physicians' offices and demonstration rooms. The growth of the Sloane Hospital has been due largely to the generosity of the Sloane family.

The status of this great project at present is about as follows: The Presbyterian Hospital is receiving medical and surgical cases and operating to capacity; some of the clinics and the outpatient department are functioning; the College of Physicians and Surgeons is partially functioning and the entire school will be moved this month; the Squier Urological Clinic is operating; the Presbyterian Hospital School of Nursing has 152 student nurses in the new Anna C. Maxwell Hall; the Stephen B. Harkness Pavilion has opened all its private patient floors, roentgen-ray units, physicians' private practice offices and infirmary for professional personnel. The Vanderbilt Clinic will probably move to the medical center about July 1; the Neurological Institute will move about January 1, and the New York State Psychiatric Institute and Hospital in the fall; no date has yet been set for the completion of the building of the Babies' Hospital which is still functioning at the old location, Fifty-Ninth Street and Lexington Avenue; the School of Dental and Oral Surgery of Columbia University will move to the medical center in the fall.

V 90
1928

## OKLAHOMA

**Award to Dr. Rayburn.**—The Rhode Island Medical Society at its one hundred and seventeenth annual meeting, Providence, June 7, awarded the Fiske prize of $250 to Dr. Charles R. Rayburn, Norman, for his essay "Etiology, Symptomatology, Diagnosis and Treatment of Epidemic Encephalitis," submitted during the last year. The Fiske contest is conducted annually and is open to any physician in the country. The prize is awarded by the trustees for the best paper on a subject which they designate.

## OREGON

**Society News.**—Dr. James Marr Bisaillon, Portland, addressed the Coos County Medical Society, Marshfield, April 6, on "Differential Diagnosis of Early Tuberculosis."——Dr. Ralph C. Matson, Portland, addressed the Jackson County Medical Society, April 18, on "The Early Diagnosis of Tuberculosis."——Josephine County is to construct a new county hospital at Grant's Pass, which is to be two stories high and of granite and concrete.——Medical reserve officers of the ninety-sixth division and their families were guests, May 20, at a barbecue at the home of Col. Herbert M. Greene on the Willamette River. About 150 were present, among whom were the state health officer, Dr. Frederick Stricker, Portland, Brig. Gen. James A. Reeves, U. S. Army, and Major Herbert C. Mallory.——At the thirty-seventh annual meeting of the Southern Oregon Medical Society, Roseburg, Dr. William B. Holden, Portland, discussed intestinal obstruction, illustrated with motion pictures; Dr. T. Homer Coffen, Portland, relation of acute indigestion to heart disease, and Dr. Charles Ulysses Moore, Portland, nonsurgical treatment of pyloric obstruction in infants.

## PENNSYLVANIA

**Personal.**—Dr. Harry A. Shaffer, Williamstown, has been elected president of the Rotary Club of Lykens, and Dr. Oscar J. Kingsbury, president of the Kiwanis Club of Steelton.——Mrs. Lester Lessig, Lansdowne, has donated $5,000 to the Polyclinic Hospital, Harrisburg, in memory of her father, Dr. Charles E. L. Keen, who was chief of the staff of the pediatric department for many years.

**Physical Defects in School Children.**—The school division of the state department of health has reported to the secretary of health that during the present school term it has supervised the physical examination of 456,928 school children in 14,824 schools of the fourth class school districts, and that of these pupils examined, 303,146 were reported as having physical defects requiring treatment and correction. The office of the school division issued notices through the teachers advising parents of the defects found and making recommendations for treatment.

**Hospital News.**—York County is endeavoring to raise $1,200,000 for a new 170-bed hospital in York; the old York Hospital is unable to meet the present demands for service.——Harrisburg and Dauphin County will each contribute $50,000 for the construction of a contagious disease hospital.——The Bryn Mawr Hospital plans to conduct a "medical records training class" for women with a view to supplying medical records clerks trained along the lines of the required "minimum standard." There will be no tuition, the service rendered being accepted as the equivalent of training given. The course will be for six months and will offer students an opportunity to attend the lectures of a standard training school for nurses as well.

**Society News.**—Dr. Frank F. D. Reckord addressed the Dauphin County Medical Society, Harrisburg, June 5, on diagnosis and exhibited some new apparatus; the society was addressed, May 1, by Dr. George R. Moffitt, Harrisburg, on "Early Symptoms and Treatment of Cancer."——The Harrisburg Academy of Medicine was addressed, May 15, by Dr. Edward H. Richardson, professor of gynecology, Johns Hopkins University School of Medicine, Baltimore, on "Progress in the Study and Treatment of Uterine Cancer"; at the June 19 meeting of the academy there will be an exhibition of motion pictures on how biologic products are made.——Dr. Alfred E. Cohn, New York, will address the Allegheny County Medical Society, Pittsburgh, June 19, on "Digitalis and Quinidine Medication."

## RHODE ISLAND

**State Medical Election.**—At the one hundred and seventeenth annual meeting of the Rhode Island Medical Society, Providence, June 7, Dr. Arthur H. Harrington, Providence, was elected president; Drs. Frank T. Fulton, Providence, and Julian A. Chase, Pawtucket, vice presidents; Dr. Jesse E. Mowry, Providence, treasurer, and Dr. James W. Leech, secretary. Drs. Norman M. MacLeod, Newport, Herbert G. Partridge and Byron U. Richards, Providence, were appointed members of the New England Medical Council; Dr. Carl D. Sawyer, Providence, curator, and Dr. Murray S. Danforth, Providence, auditor. Among the speakers at this meeting were Dr. Richard M. Smith, Boston, and his subject "Fundamental Principles in the Artificial Feeding of Infants"; Dr. Channing Frothingham, Boston, "Advances in Classification and Treatment of Acute and Chronic Nephritis," and Dr. William E. Ladd, Boston, "Abnormalities of the Urinary Tract." The trustees selected for the next Fiske prize contest the topic "Etiology, Symptomatology and Prognosis of Brain Tumor." (See Oklahoma news.)

## UTAH

**Society News.**—Dr. Fuller B. Bailey, Salt Lake City, addressed the Weber County Medical Society, March 29, on "Diagnosis of Peptic Ulcer," and Dr. Martin C. Lindem, Salt Lake City, "Technic in Abdominal Surgery."——Drs. Eugene S. Kilgore and Howard C. Naffziger, San Francisco, addressed the Salt Lake County Medical Society, Salt Lake City, May 14, on "Syphilis of the Heart and Aorta" and "Diagnosis of Cerebral Tumors," respectively. Drs. George W. Pierce and Thomas Henshaw Kelly, San Francisco, addressed the society, May 28, on "Plastic Surgery Since the War" and "Pregnant Women and Damaged Hearts," respectively. In both instances, according to the Bulletin of the San Francisco County Medical Society, the speakers were invited the succeeding nights to repeat their papers before the Weber County Medical Society at Ogden.

## WISCONSIN

**Personal.**—John G. Sinclair, Ph.D., department of anatomy, University of Wisconsin Medical School, Madison, has been appointed associate professor of embryology and histology at the University of Texas School of Medicine, Galveston.

**Society News.**—Dr. Arthur C. Strachauer, Minneapolis, addressed the Eau Claire County Medical Society, Eau Claire, May 29, on "Carcinoma of the Rectum," illustrated with lantern slides.——Dr. George Barger, professor of medical chemistry, University of Edinburgh, and visiting professor at Cornell University, addressed the University of Wisconsin Medical Society, June 7, on "The Thyroid Gland and Thyroxin."

**Dr. Bock Honored.**—A banquet was given at the University Club, Milwaukee, June 2, in honor of Dr. Otto B. Bock of Sheboygan to celebrate the third anniversary of the Wisconsin Basic Science Law for the passage of which through the legislature Dr. Bock was largely responsible. The banquet, sponsored by the State Medical Society of Wisconsin, was a surprise to the guest of honor, who was presented with a bound volume of letters of appreciation from physicians, legislators and friends. Dr. Arthur W. Rogers, Oconomowoc, past president of the state society, presided at the banquet. Dr. John J. McGovern, Milwaukee, president of the state society, Dr. Charles R. Bardeen, dean and professor of anatomy of the University of Wisconsin Medical School, Madison, and Dr. Edward Evans, La Crosse, chairman of the council of the state society, made brief addresses on the basic science law and the part played by Dr. Bock in its passage. Dr. Horace M. Brown, Milwaukee, gave a summary of Dr. Bock's career as a physician, statesman and soldier.

## GENERAL

**English Speaking Physicians in Europe.**—A list of American and English physicians practicing in Europe may be obtained without charge by any person contemplating a trip abroad, on request to the secretary of the Continental Anglo-American Medical Society, Dr. B. Sherwood-Dunn, 54, Boulevard Victor Hugo, Nice, France.

**Catalogue of Insects Related to Health.**—Prof. Charles W. Stiles, U. S. Public Health Service, and Albert Hassall, U. S. Bureau of Animal Industry, have prepared a key catalogue of insects of importance in public health, which has been published as Bulletin 150, Hygienic Laboratory. It is of special interest to public health officers, zoologists, physicians and medical students, being a condensed summary of the entire field of public health entomology.

**National Board of Examiners.**—At the twelfth annual meeting of the National Board of Medical Examiners, Washington, D. C., May 3, Dr. Evarts A. Graham, professor of surgery, Washington University Medical School, St. Louis, was elected to membership to succeed Dr. John M. T. Finney, Baltimore, whose term expired. Dr. Walter L. Bierring, Des Moines, Iowa, was reelected president of the board, and Drs. Alexander S. Begg, Boston, Walter E. Garrey, Nashville, Tenn., Waller S. Leathers, Nashville, Tenn., and John Whitridge Williams, Baltimore, were reelected members. The titles of the secretary and of the managing director and treasurer were changed to medical secretary and executive secretary and treasurer, respectively. Dr. John S. Rodman, Philadelphia, was reelected medical secretary and Mr. Everett S. Elwood was elected executive secretary and treasurer. During the last year, 10 per cent more candidates were registered and examined than in the previous year, and the board established additional subsidiary boards to conduct the part III examination in Los Angeles and New Haven.

**Veterans' Bureau Needs Physicians.**—There is a shortage of eligible physicians for positions of junior medical officers in hospitals of the U. S. Veterans' Bureau throughout the country. Applications will be received by the U. S. Civil Service Commission, Washington, D. C., until June 30. Applicants will not be required to report for examination at any place but will be rated on their education, training and experience. The entrance salary is from $1,860 to $2,400 a year without allowances; increases of not more than $600 a year in the discretion of the appointing officer may be granted at the end of six months, and at the end of eighteen months a salary of $3,300 a year may be paid, subject to the existence of vacancies. Higher salaried positions are filled through promotions. The duties, under supervision, are to admit patients, take histories, make physical and mental examinations and ward rounds, prescribe for minor ailments or for emergency cases, perform minor surgical operations and assist at major operations and in redressing, administer anesthetics, make routine laboratory tests, administer vaccines, and, among other things, to compile statistics that require medical training.

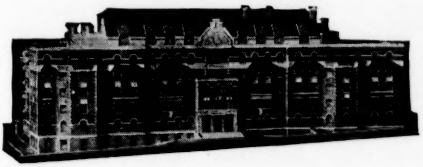
**Names Published Monthly.**—In connection with the enforcement of federal laws governing the interstate shipment of veterinary products, live stock and meats, the U. S. Department of Agriculture announces that in addition to penalties imposed by the courts and the suspensions or revocation of licenses involved, the names and addresses of violators are published monthly as a matter of public record. The latest monthly service and regulatory announcements show that four violators were fined from $100 to $250 for violation of quarantine laws, the offense being the shipment of cattle interstate without prior tuberculin testing, and in a fifth instance for this offense a jail sentence was imposed. The bureau of animal industry revoked the license of one firm producing biologic products and suspended the license of another. In the first case the cause was the fact that the establishment was found to be insanitary, defective and improperly conducted and products therein were found to be contaminated. In the second case, investigation showed that the establishment prepared a quantity of serum without bureau supervision; that it was not being held under bureau lock, and that technic was faulty and insanitary conditions were permitted to exist.

**International Oto-Rhino-Laryngological Congress.**—The organizing committee for the first International Oto-Rhino-Laryngological Congress to be held at Copenhagen, from July 29 to August 1, announces that so many papers have been received for presentation that the papers announced by Danish participants in the congress must be withdrawn, and that persons who had registered for several papers must withdraw their supernumerary papers and read one paper only. The committee requests such persons to write the secretary immediately which of their papers they desire to read. If there is time they will get occasion to read their other papers. However, all the announced papers, including those which have had to be withdrawn in accordance with the foregoing, except the Danish papers, will be published in the form of résumés and be forwarded to all participants before the congress meets. Each lecturer will have seven minutes at his disposal and the discussions must not exceed five minutes. A lecturer not present when his paper is scheduled to be read surrenders any further claim to lecturing. The committee says that presentation of subscription tickets will facilitate entering Denmark by exempting the examination of luggage by the customs officer. Tickets will be sent to participants on payment of the fee of 30 Danish kroner for physicians and 15 for each member of the family. On payment of the fee to the treasurer, Dr. Jorgen Moller, Vestre Boulevard 13, Copenhagen, tickets will be sent to participants.

**American Pharmaceutical Association.**—The campaign of this association for $1,000,000 to build and equip a headquarters building, on May 1, amounted to about $704,000. A site has been purchased facing the new Mall and directly opposite the Lincoln Memorial on B Street, Washington, D. C., commanding an unobstructed view of the Potomac River, the Virginia hills, the new Arlington Memorial Bridge and other monuments and between the National Academy of Sciences and the site where the headquarters of the U. S. Public Health Service are to be located. The headquarters building is to be a clearing house and service institution for pharmacy. The reference library, the historical museum and the research laboratory are still to be provided for. Subscriptions can be made toward the equipment of the library and the museum. A maintenance endowment of $100,000 is needed for the library and $50,000 for the museum, and special equipment is desired for the research laboratory. Gifts for studies in the research department will be used as the donors may desire. The general equipment of the laboratory has been provided for by a donation of $10,000 from Alfred R. L. Dohme, Ph.D., Baltimore. The laboratory is intended primarily for research work on U. S. P. and N. F. problems and for the latter the association has a fund built up from the profits of the National Formulary of about $50,000. The subscriptions to the million dollar fund have been made mostly on the five year plan. Building operations are expected to start next year and be finished in 1930. Members of the committees having the project in charge and the officers of the association will gladly furnish information or consult with any one about opportunities offered by the new building. The chairman of the headquarters building campaign is H. A. B. Dunning, Baltimore. The American Pharmaceutical Association will hold its seventy-sixth annual meeting at Portland, Maine, August 20-25.

**Health Conditions Among the Indians.**—The Institute for Government Research has completed a two year survey of conditions in the Indian country made at the request of the secretary of the interior, Dr. Hubert Work. The results have been published under the title "The Problem of Indian Administration." The most prevalent diseases found among the Indians were tuberculosis, trachoma and diseases of early infancy. They are considered to be associated with bad living conditions and improper diet among these people. Milk is generally not available, not even for the babies. Few Indians keep cows. The Indians' diet, even at the boys' schools on the reservations, does not fully meet the requirements of health and the development of the child. The report considers that the government has failed to develop an adequate program of public health administration and preventive medicine for the Indians, although the progress made in that direction under the department of the interior is commended. It recommends increased appropriations to carry on this work, as it is difficult to secure competent health workers at the low salaries now paid. This applies not only to physicians but to dentists and nurses. The secretary of the interior brought this to the attention of Congress in 1927. The hospitals and the sanatoriums maintained by the Indian service do not meet the minimum standards for institutions of that class. They are considered defective in personnel, design, equipment and maintenance. Physicians in the service must be graduates of class A medical schools, and that requirement increases the difficulty of obtaining a sufficient number. The salaries paid by the government for health work among the Indians are below those paid in its other public health activities, and for that reason the Indian service has not been able to adhere to its entrance qualifications. Commendation is given Secretary Work for securing an efficient public health officer from the U. S. Public Health Service as chief medical officer of the Indian service, and also for the determination of the Indian office to substitute trained nurses for the inexperienced and untrained field matrons.

**The American Dormitory in Paris.**—An international student center, sponsored by the University of Paris and known as the Cité Universitaire, is being constructed in Paris to provide students of moderate means from various countries a



place to live comfortably, but without luxury, and under sanitary conditions. Dormitories are to be built on sites donated by the University of Paris from funds provided by the country whose students will occupy them. The American dormitory, which is under construction, is shown in the accompanying picture. It will house 250 students, among whom, of course, will be medical students. Through the courtesy of the management of the French dormitories, fifty French students will be housed in the American dormitory and fifty American students will be housed in the French dormitory. The American building will cost $400,000, three fourths of which has been raised. American universities and colleges have been asked to provide rooms at $2,500 each. Individuals also have given rooms, notably one or two in memory of American physicians who studied in Paris. There are said to be 4,000 American students in France, many of whom are living in unhygienic chambers. Seven French dormitories, and a Canadian and a Belgian dormitory have been built and occupied; the Argentine and British dormitories are under construction. At the ceremony of laying the cornerstone of the American dormitory, recently, were Ambassador Herrick, Senator Honnorat, M. Barthou, minister of justice of France, Marshal Joffre, General Gouraud, military governor of France, and many other notable persons. The chairman of the American committee is Dr. Homer Gage, Worcester, Mass., with whom, in addition to laymen on the committee, are Drs. William S. Thayer, President of the American Medical Association; William H. Welch, Johns Hopkins University School of Medicine, Baltimore; Ray Lyman Wilbur, president of Stanford University, and Frederick C. Shattuck, Boston. Persons desiring to contribute to this cause should make checks payable to J. P. Morgan and Company, American Dormitory Fund, and should mail them to Dr. Gage at Room 2008, 50 East Forty-Second Street, New York. (See page 1962.)

V 90
192

# Foreign Letters

## LONDON

*(From Our Regular Correspondent)*

May 26, 1928.

### The Harvey Tercentenary

England has been occupied recently with the centenaries of her greatest sons in the sphere of medical science. Last year was celebrated the centenary of the birth of Lister; in February of the present year that of the bicentenary of the birth of John Hunter, and now the medical world has united with all that is eminent in English life in celebrating the tercentenary of the publication of the "Exercitatio Anatomica de Motu Cordis et Sanguinis in Animalibus" of William Harvey, which once for all demonstrated the circulation of the blood and dispelled the errors of medieval theories. The international celebration began with a reception by the king of delegates from all parts of the world. Sir John Rose Bradford, president of the College of Physicians, presented 100 delegates to the king from twenty-eight countries. In the course of an address he said that Harvey's demonstration that the same blood must unceasingly flow round and round the body, visiting its remotest parts, swept away the visionary speculations of his predecessors and paved the way for a scientific explanation of the purpose of the circulation. Thus the publication of "De Motu Cordis" had been rightly acclaimed as the birthday of physiology and of scientific medicine. The king in identifying himself with the commemoration of Harvey's work was but treading in the footsteps of his ancestors. James I and Charles I made Harvey their physician, and the latter supplied him with the bodies of deer for his anatomic studies. The king in reply said that the importance of Harvey's work could not be exaggerated. In an age when physiology was in darkness and chaos he laid the foundation of physiology by demonstrating not only the fact of the circulation of the blood but also the manner in which it took place.

The ceremony of welcoming delegates and receiving addresses from the universities, academies and learned institutions throughout the world took place at the Royal College of Physicians. In the library sat the president with the censors at a table bearing the insignia of the college, the caduceus, and the book of statutes. The assembly was brilliant in color from the academic robes of the universities of the world. The president said that they were met to honor the memory of William Harvey and pay a tribute of respect to the method of inquiry which he instituted. The college felt that the occasion was suitable for instituting honorary fellowships. Although it had existed more than 400 years it had elected few honorary fellows. Among those now elected were Sir Ernest Rutherford (president of the Royal Society), Prof. Ivan Pavlov and Prof. Karl Wenckebach. Three eulogies were delivered. Sir Charles Sherrington said that the new day of the Renaissance broke first on scholarship and letters. In science it reset the mechanics of the stars before it bent to the study of terrestrial life. In the latter it adventured first on the outward forms of organ and organism. Later it turned to explain their inward meaning, the living function itself. For this last step the Renaissance was William Harvey. Harvey was a fervent pupil of the masters of antiquity. But his famous exhortation to others, to search out Nature by experiment, he addressed early to himself. Hence after Cambridge and Padua, the year of Shakespeare's death found him Lumleian lecturer of the Royal College of Physicians, teaching from first-hand knowledge the surprising heresy and the invincible truth that the whole blood circulated the body in two successive circuits driven by a muscular pump, that age-long mystery, the heart. His great discovery, apart from its intellectual worth, secured an item of knowledge than which no other single item had so served to grow, as from a seed, medicine as we now know it. And it was the reassertion of the method of experimentation, which, wedded to observation, had created the medicine—and the surgery—of the civilized world today.

Prof. A. Chauffard of Paris said that the first thing which arrested his attention in the "De Motu Cordis" was its courage. The galenic doctrine, so long accepted, entered into its decline at the beginning of the seventeenth century. The first blow had been struck by Vesalius, who in 1555 denied the existence of pores of the ventricular septum. Michael Servetus in 1553 and Columbus in 1559 had partially foreseen the existence of the pulmonary circulation. But this was only a fragment of the truth and to Harvey alone was due the honor of establishing the analytic and synthetic survey of the movement of the heart and of the structure of the small and large circulation. The silence of twelve years during which Harvey pursued his investigations in order to make his demonstrations complete and final was part of the incubatory period which seemed inseparable from great discoveries. Francis Bacon waited twelve years, Newton and Darwin over twenty years. Was not Pasteur also a man of studied reflection and prudent caution until the time arrived for his demonstrations to be unassailable? Hence it had been said, "Genius is a long patience."

Prof. Franz Keibel of the University of Berlin described Harvey as not only a supreme experimental physiologist but also an admirable anatomist. Naturally, Harvey had predecessors. But the great reformer of anatomy, Vesalius, though he could not find holes in the septum, assumed the passage of spirits through it, agreeing with his great opponent Galen. Servetus, who discovered the lesser circulation, was the forerunner of Harvey. Other forerunners were Caesalpinus, Cannani, Harvey's teacher, Fabricius, and Fallopius. Cannani discovered the valves of the veins. All had the key of the great riddle in their hands; they knew the isolated facts by which they might have solved it, but failed to do so. Therefore to Harvey belonged the full glory of discovering the circulation of the blood.

#### THE DEMONSTRATIONS

At University College, which for many years has been the great British center of physiologic teaching and research, a series of most interesting demonstrations were given. Sir Thomas Lewis and Dr. H. H. Dale, F.R.S., were invited by the Royal College of Physicians to organize a series of demonstrations reproducing Harvey's experiments, but they came to the conclusion that it would be difficult to insure complete success, since, though Harvey's experiments are simple and easy to reproduce, some of them do not lend themselves readily to demonstration. They decided that the object in view could best be attained by making cinematographic records of the things which Harvey saw and of the experiments which he made. The film opened with Jansen's portrait of Harvey. Then followed a diagram showing Galen's doctrines which formed Harvey's starting point. Next came the following series of films of the living heart: 1. Auricular ejection. The evidence against the view that the ventricle fills by suction. The normal sequence of the pumping of blood from auricle into ventricle was shown. 2. Ventricular ejection. Evidence that the arteries are passive and are filled by forcible ejection from the ventricles. It was shown that when the ventricle contracts it pales, becomes small and hard, the arteries expand and, when cut, blood gushes forth. A brief summary of previous views of the pulmonary circulation was interspersed. 3. Passage through the lungs. It was shown that pores in the interventricular septum could not be demonstrated, that the blood left the right heart by the pulmonary artery and could not return by the pulmonary valves. The presence of a way through the lungs to the left heart was demonstrated by injections. Thus in these three steps Harvey had now shown that blood passes from the veins to the

arteries by a pulmonary course. Next came his most crucial and original conclusions. 4. Continuous movement from veins to arteries. Harvey's calculation that within a short time more blood must be ejected from the left ventricle than is to be found in the whole body was shown. Continuous motion was displayed by obstructing main veins or arteries and observing that the vessel empties beyond the obstruction and fills behind it. 5. Passage from arteries to veins. The movement of blood in a human limb was shown, how on an artery's being obstructed it filled from the center and on a vein's being obstructed it filled from the periphery. Similar conclusions followed the cutting of arteries and veins in living animals. Finally the function of the venous valves and their control of the direction of venous flow was displayed in the human limb. The audience, composed of distinguished physicians from the whole world, frequently signified appreciation of this remarkable film by applause.

Profs. Lovatt Evans and Verney gave a demonstration of the isolated mammalian heart-lung preparation, devised by the late Professor Starling for the study of the reactions to measurable changes in the conditions under which the heart is working. The heart and lungs are completely isolated from the rest of the animal, the normal peripheral circulation being replaced by a system of tubes representing its arterial, capillary and venous components. The rate of inflow of blood into the right auricle, the temperature of the blood and its composition, as well as the resistance against which the left ventricle has to work, can be varied and measured at will and their effects on the volume of the heart, its rate, and the coronary flow measured. Dr. Dale demonstrated an artificial circulation the converse of this preparation, designed by Dr. E. H. J. Schuster. Two pumps, the throws of which are independently adjustable, replace the two ventricles, so that the reactions of the blood vessels of both major and minor circulations and the resulting changes in resistance and in the distribution of the blood can be studied free from the complications of compensatory or other changes in the action of the heart. Sir Arthur Keith demonstrated models made to illustrate the movements of the human heart and to explain the negative wave in the jugular pulse.

## PARIS

*(From Our Regular Correspondent)*

May 9, 1928.

### The Defense of the B C G Antituberculosis Vaccine

The attack leveled, before the Academy of Medicine, by the veterinarian Lignières of Buenos Aires, against the B C G vaccine caused considerable sensation in scientific circles, and even among the general public. M. Calmette presented his defense before a large audience at the next meeting of the academy. The assistant director of the Pasteur Institute confined himself to the reading of a declaration that the situation would be clarified on the receipt of complete reports on the researches carried out in various countries on the effects of the B C G vaccine. He stated that his opponent Professor Lignières had furnished no proofs, experimental or clinical, on which to base his assertion that the B C G vaccine is a dangerous remedy. No one has been able to demonstrate that the vaccine produces an infection susceptible of transmission. Like all vaccines, it incites a reaction, but the reaction is benign. It is precisely the presence of the attenuated bacillus in the lymph glands that protects the subject against true tuberculosis. M. Calmette referred to the investigations of Kraus and Gerlack in Vienna, Lange in Berlin, Ascoli in Milan, and Park in New York. All these investigators have confirmed that the B C G vaccine, when injected in animals—even in large doses—never produces progressive tuberculous lesions. Furthermore, the B C G vaccine, even after a year's abode in the body of a vaccinated subject, has no effect on the guinea-pig. Finally, the mortality in vaccinated children is frankly diminished, as compared with unvaccinated children of the same age. Fewer of the former die, not only from tuberculosis but from all other diseases; they are more resistant to disease in general. The harmlessness and the preventive efficacy of the B C G vaccination against tuberculosis are so evident that the public health services of several French and foreign cities have succeeded, for more than a year now, in inducing from 80 to 89 per cent of the families to have their new-born vaccinated against tuberculosis. It is to be hoped that this confidence will not be impaired by the hypothetic considerations of M. Lignières. This declaration met with unanimous applause. M. Lignières, in replying to M. Calmette, stated that it was not his purpose to destroy such confidence. He admitted that the B C G vaccine never causes tuberculosis. But he advocated administering the vaccine only to children in particular danger of contracting tuberculosis.

### The New Chamber of Deputies

The recent elections have changed completely the composition of the chamber of deputies and that of the ministry. The physicians constitute at present one of the larger groups in the chamber. The lawyers, as usual, have the largest representation—132 members. The landlords have sixty-seven members, the industrialists sixty-two, the journalists fifty-two, the professors and teachers forty-two, and the physicians forty-three. There are seven pharmacists and five veterinarians. M. André Fallières, who for two years had been minister of labor and of health under the ministry of Poincaré, was not reelected as deputy by his constituency, and consequently resigned as minister. M. Poincaré will not appoint his successor until June, after the first meeting of the new chamber. From the fusion of the two ministries of health and labor, a preponderance of the latter over the former has resulted, bringing thereby the department of health more under the domination of politics. The Academy of Medicine has presented a formal request to M. Poincaré that the department of health shall have its own minister and be completely independent of the ministry of labor. The academy has emphasized the very evident fact that preventive hygiene is the most simple means, and the least expensive, of decreasing the expenditures for charity patients incurred by the hospitals, the psychopathic institutions and the sanatoriums. M. Poincaré has not yet announced his final decision in the matter.

### The Physicians' Art Exhibit

The Physicians' Art Exhibit, which has been held each year for the past nine years, affords an opportunity for the display of works of art—painting, sculpture, aquarelle, engraving, decorative objects—executed by physicians and members of their family. This year's exhibit has been opened, as usual, in the publishing house center, Boulevard St. Germain. It was organized by a committee of which Prof. G. Hayem (aged 92) is chairman. The general secretary is Dr. P. Rabier. The exhibit comprised, this year, 500 works of art, many of which possessed real artistic value, as was emphasized by many press comments. There were sculptures by P. Hayem, Dr. Paulin, Dr. de Hérain, and Dr. Philibert, and numerous paintings and aquarelles bearing the names of eminent clinicians: Prof. Marcel Labbé, Prof. Bezançon, Dr. Legendre, Dr. Lemière, Dr. Lereboullet, Dr. Peugniez, Dr. Lortat-Jacob, members of the Academy of Medicine, agrégés of the Faculté de médecine or physicians to the hospitals. The exhibit closed with a tombola, or lottery, by which means many of the entries were disposed of for the benefit of the Maison de retraite des médecins.

### Laying of the Corner Stone of the American Dormitory at the University City

The American Dormitory, or the *Maison américaine*, at the University City in Paris, owes its launching to a gift of several million francs donated for the purpose by Dr. Homer Gage and his wife, under date of April 9, 1927. The first direct

step toward a realization of the project has now been made, following the appropriation of a large parcel of land by the university. The coroner stone was recently laid during impressive ceremonies. After addresses by M. Honnorat, former minister and the chief motive factor in the founding of the University City, and by M. Charléty, rector of the University of Paris, Ambassador Herrick, much moved, gave an impressive address in which, after praising the generosity of Mr. and Mrs. Homer Gage, prognosticated many happy results from the contact of the young intellectual élite of the two nations. M. Barthou replied in fitting words, in which he emphasized that no great undertaking could be accomplished without the aid of the United States. A report of the ceremonies was enclosed in a leaden tube, and Mr. Herrick placed it in the block of granite that is to form the corner stone of the dormitory and sealed it with a dash of mortar and a stroke of the trowel, while the military band played the American hymn and the Marseillaise. From the windows of the French, Belgian and Canadian dormitories, recently erected, the students shouted their applause. Within two years, nearly 300 men and women students from the United States will be their neighbors.

## ITALY

*(From Our Regular Correspondent)*

April 22, 1928.

### Changes in the Laws Demanded by Psychiatrists

During the recent national psychiatric congress, Prof. Vincenzo Bianchi presented a paper on the civil status of patients and mentally abnormal subjects according to the present laws, and possible needs of reform. The congress formulated the following conclusions: 1. The determination of the civil capacity of a person charged with mental weakness shall, by legal disposition, be left solely to the decision of a medical alienist. 2. Interdiction proceedings shall be brought against alcohol addicts and drug addicts. 3. In periodic psychosis, the intervals between attacks shall be considered, from the medico-legal point of view, on the same basis as the periods of the attacks. 4. The studies on the remission states that some patients with general paralysis present as a result of the inoculation with malaria cannot be regarded as sufficiently advanced to affirm, clinically or judicially, the complete recovery of the patient. 5. The judicial conception of the marriage contract, which today is based exclusively on the individual capacity of the subject, should be determined by legal provisions that take into consideration the welfare of the general public and the improvement of the race.

### Convention of Clinicians at Tripoli

Forty professors of Italian medical schools, for the most part clinicians, met recently at Tripoli to study the climatic and thalassotherapeutic conditions of that region. The convention, in closing its session, recommended to the ministers having jurisdiction that Tripoli be officially recognized as a climatic and thalassotherapeutic resort.

### A School in the Mountain Regions

The municipality of Milan has created a mountain-air school, by way of experiment. For the present, twenty-four children, selected by the school medical inspectors as being in need of climatic treatment, have been assigned to the school. The site of the institution is the Alpine village of the Touring-Club Italiano, which is 950 meters above sea level, on the slopes of Mount Piambello, where, in summer, 300 poor children of Milan will be sent for treatment.

### A Higher Institution of Physical Education

The courses of the Istituto superiore di educazione fisica in Rome have been begun. This new institution, which has the character of a university department, trains special personnel for the giving of instruction in schools of physical education. After two years' attendance the students will receive certificates entitling them to give instruction in physical education, and after a third year they will receive, if fully qualified, the doctor's title. Two hundred students will be admitted to the courses, all of them boarding pupils. The institute, in addition to rooms devoted to theoretical instruction, will be provided with scientific collections and various rooms for the Greco-Roman combat, boxing, fencing, and the like. Near the institute there will be an athletic field of the dimensions prescribed for international contests. Temporarily, until the buildings and grounds are completed, the courses are being held in the Scuola militare di educazione fisica.

### The Prevention of Suicide

At a session of the Lega italiana per la profilassi e l'igiene mentale, Professor Antonini directed the attention of the conventionists to the phenomenon of suicide in large urban centers, and emphasized provisions to combat it. A commission is now collecting data relative to every suicide that is committed or attempted—motive, means employed, and the like. The commission will later propose to the league the prophylactic measures that it considers suitable.

## BERLIN

*(From Our Regular Correspondent)*

May 5, 1928.

### The Wiesbaden Congress of the German Society of Internal Medicine

*(Concluded from page 1886)*

The papers presented on the third day of the Congress of the Deutsche Gesellschaft für innere Medizin, held in Wiesbaden, April 16-19, were devoted to the treatment of pernicious anemia. In the introductory paper, Seyderhelm of Frankfort-on-the-Main discussed liver treatment. Since the publication of Minot and Murphy's article in 1926, 150 publications dealing with liver therapy and reporting 2,000 improved and only twenty resistant cases have appeared. The daily dosage of liver is 200 Gm. Raw liver or liver extract is the most effective, whereas prolonged cooking (frying) lowers its efficacy. In addition to the liver, Seyderhelm administers hydrochloric acid and food rich in vitamins. After a short interval of five or six days, an increase of the reticulocytes, and later, the augmentation of hemoglobin and leukocytes, furnish evidence of improvement. Only severe funicular disturbances and achylia gastrica fail to respond to liver treatment. However, if the liver diet is stopped, the patient will suffer a relapse, even though the blood has been brought up to normal. On the other hand, if the liver diet is continued there is a chance of polycythemia developing. In some cases, therefore, after the blood count has reached normal the dosage of liver must be decreased. According to the researches of Cohn, the active substance in the liver is not any of the vitamins. The test applied in America to determine the potency of preparations is whether, within five days, a certain unit of liver extract will produce an increase of the reticulocytes. Liver therapy does not make it necessary to abandon the toxin theory as to the cause of pernicious anemia, since good results have been secured in *Bothriocephalus* anemia and also in anemia associated with pregnancy and with syphilis. Liver treatment is therefore solely a form of "substitution therapy," which acts symptomatically. Hanssen of Oslo had observed the same effects from the liver diet that he had noted in spontaneous remissions; namely, an increase of the reticulocytes and a retrogression of the bilirubinemia. He stated that in northern Norway, where a great deal of fish is eaten, anemia is rare. Beckmann of Greifswald reported that he had been able to prepare liver extracts that are parenterally active; also Braun of Munich had obtained a liver preparation that is palatable and of which less than 1 Gm.

a day suffices. Rosenthal, Wislitzki and Kollek showed that by oxidation in a number of protein derivatives a blood toxin may arise in the liver. Veil of Jena found in the color of the urine an index of hemolysis and the retrogressive metamorphosis of the blood termed *mauserung*, and controls in that manner the therapeutic effects of liver administration. Schottmüller reported favorable experiences with the liver diet, his observations being not essentially different from those of Seyderhelm. Jungmann of Berlin recommended continuing the liver treatment until a normal condition of the blood is attained. Then, in many cases, the patient can be kept in a normal condition for several months. The liver extracts he has not found as effective as the liver itself. Adlersberg of Vienna and Naegeli of Zurich cautioned against overestimation of the therapeutic results of liver therapy and reported that they had observed some failures, whereas Morawitz of Leipzig did not find any resistant cases in a series of forty-two, though in one instance an attack of gout was elicited.

Professor Morawitz of Leipzig spoke on the subject of disturbances of the circulation. Sudden reduction of the blood pressure in hypertonia and apoplexy may injure more than it benefits. It is better to lower the pressure slowly through regulation of the diet and mode of living, and possibly by the administration of hormones. In cardiac asthma he observed in one year thirty-one patients die suddenly from heart failure. Since he began the administration of continued 0.1 Gm. doses of quinidine twice daily, he has observed only one such case in four months. Volhard regulates the blood pressure solely through the diet; avoids the use of morphine, and gives in Cheyne-Stokes' respiration a soluble theophylline preparation together with oxygen.

The last day of the congress, a joint session with the Deutsche pathologische Gesellschaft was held, the special topic on the program being "Chronic Enlargement of the Spleen." Professor Hueck of Leipzig presented a paper on "The Normal Spleen as a Blood Reservoir," from the standpoint of its physiologic importance. It is not yet clear whether the vascular system is closed at all points and just what the arrangement of the lymph node capillaries is. Certain areas of the capillary system must have a more pervious structure and do not admit of a confining endothelial covering. The possibility of a rapid change in the volume of the spleen and in the mode of blood distribution must be provided for, which explains the spongy nature of the structure. He emphasized the importance of the reticulum as a flooding chamber and the construction of the capillary veins as blood tubules. A constant alternating change between blood-filled and excluded areas, blood-filled and empty blood chambers is made possible by this arrangement.

Individual factors, of course, play a part; likewise, the varying condition of the several blood areas and the changing extent of the lymphatic tissue. Also the structure and number of the arterial tunics and the relation of muscle tonus to blood pressure influence the amount of blood contained in these areas. The physicochemical nature of the blood chambers influences the metabolism of the spleen to the same extent as to the hormonal and other changes in the quality of the blood. However, knowledge of the subject is still incomplete. Professor Naegeli of Zurich gave a survey of the various clinical types of splenomegaly, and, for a fuller understanding of the matter, presented a table showing the biologic structure and the development of the various types of cells found in the spleen. Each of the cell types may become multiplied and produce splenomegaly. He discussed, in succession, the various kinds of splenomegaly; namely, constitutional anemia and the type not related to constitutional factors, pernicious anemia, genuine polycythemia, *marmorkrankheit*, reticulosis of the Gaucher type, cirrhosis of the liver (Hanot, Banti, Wilson), the thrombopenic disorders of the portal vein, pericarditic pseudocirrhosis of the liver, aspergillosis (still imperfectly understood), swelling of the spleen in infections, and, finally, the various genuine tumors of the spleen.

Lubarsch presented a paper on the pathologic anatomy of enlargement of the spleen. Enlargement of the spleen is found in association with disturbances of the circulation, blood disorders, disturbances of metabolism, complex combined disturbances, infectious and toxic diseases, neoplasms and the presence of animal parasites. For the most part, enlargement of the spleen is not an independent disorder. For many types a common mode of origin can be demonstrated. Three groups may be distinguished: enlargements that are caused by collections of blood or of various blood substances; those induced by accumulations of decomposition products, metabolism sediments or wandering cells, and, finally, by proliferation of portions of splenic structure or of other tissues brought to the place. But this classification is more or less forced, as may be seen particularly in the case of acute splenic swelling in connection with experimental suppurative peritonitis. The several groups of the aforementioned enlargements were then taken up in succession, special emphasis being laid on the enlargements in which large deposits are found in the supporting structure of the spleen. In that connection, it was frankly admitted that the conditions leading up to the deposits are not understood but that the following influences are important: circulation phenomena, the physicochemical nature of the deposited substances, and the various and changing nature of the cells of such substances. With considerable detail, Gaucher's disease was discussed in connection with Pick's researches, and it was brought out that, according to Pick, Gaucher's cells develop almost exclusively from reticular cells and that the sinus endothelium does not have any part in their production. In view of this fact, as well as from other observations, it behooves one to be cautious about accepting a postulated uniform reticulo-endothelial metabolism system, which the clinicians, especially, are inclined to put forward; for, in the first place, it has not been proved that it is even a question of a metabolism system, and, secondly, it has been proved that reticular cells and endothelium often behave quite differently. In closing, attention was called to the apparent contradiction that lies in the assumption that, from the anatomopathologic point of view, splenic enlargements constitute partial phenomena and are due to changes dependent on general disorders, whereas the clinic, by the removal of the enlarged spleen, has obtained worth-while results in many disorders. It must be considered, however, that many important correlative influences are unleashed and forces set free that affect favorably both metabolism and circulation. The study of these correlative influences with relation to the whole organism and the other organs, and particularly to the bone marrow and the lymphatic system, is still in its initial stages, and it will require hearty cooperation between the clinicians and the pathologic anatomists to clarify the situation.

Professor Eppinger of Freiburg dealt with the subject of the spleen in relation to circulation. A distinction must be made between the circulating blood and the deposited blood. As has been shown by the determination of the quantity of blood by gas analysis, in the presence of collapse, there may be too little in the arterial circulation though there is no heart failure. In extirpation of the spleen, the total quantity of blood falls; under the influence of warmth and work, it rises, likewise in fever. Narcosis, coma and poisoning bring about a lowering of the blood quantity, while high blood pressure, similar to work, effects an increase. Besides the spleen, there are other organs that exert a regulatory influence on the deposits of blood. Rössle of Basel studied the behavior of the spleen after hemorrhages and found that it is similar to that occurring in sepsis. He demonstrated the operation of fermentative processes and showed, more particularly, that the activated splenic juice exerts a desmolytic action on the connective tissues in septic and hemorrhagic processes.

V 90
1928

## Marriages

GEORGE GRADY DIXON, Ayden, N. C., to Miss Juliana Elliott of Hertford, at Fayetteville, March 24.

ADOLPH EMIL VOEGELIN, Detroit, to Miss Marion Charlotte Kingston of Philadelphia, June 6.

CHARLES HANCHETT HITCHCOCK to Miss Jeannette Chappell, both of New York, June 2.

HARRY HANFLING, Jamaica, N. Y., to Miss Sydnie Berger of New York, June 5.

W. O. COLEMAN, Joplin, Mo., to Mrs. Ida Harris of Decatur, Ill., recently.

## Deaths

**William Michael Late Coplin** ✠ Atlantic City, N. J.; Jefferson Medical College of Philadelphia, 1886; member of the American Association of Pathologists and Bacteriologists; in 1908 member of the House of Delegates and the Reference Committee on Medical Education of the American Medical Association; emeritus professor of pathology at his alma mater; for many years pathologist to the Philadelphia Hospital, at one time medical director of the Jefferson Hospital and formerly on the staffs of St. Mary's and St. Agnes' hospitals, Philadelphia; director of the department of public health and charities of Philadelphia, 1905-1907; served during the World War; author of "Manual of Pathology" and "Textbook of Practical Hygiene"; aged 63; died, May 29, of angina pectoris and arteriosclerosis.

**Leon Edward White** ✠ Boston; Dartmouth Medical School, Hanover, N. H., 1893; member of the American Academy of Ophthalmology and Oto-Laryngology, American Laryngological Association, American Laryngological, Rhinological and Otological Society, American Otological Society and the New England Otological and Laryngological Society; fellow in otology, courses for graduates, Harvard Medical School; formerly assistant in otology, Tufts College Medical School; on the staffs of the Massachusetts General Hospital and the Massachusetts Eye and Ear Infirmary; aged 60; died, May 18.

**Howard Augustus Lothrop** ✠ Boston; Harvard University Medical School, Boston, 1891; member of the American Surgical Association and the American Association for Thoracic Surgery; at one time assistant professor of surgery, Harvard University Medical School; formerly on the staffs of the Boston City Hospital and the Symmes Arlington Hospital, Arlington, Mass.; aged 63; died, June 4, at the Charlesgate Hospital, of an infection following a pin prick received while adjusting a bandage on a patient.

**Henry Arthur Powers** ✠ Emmetsburg, Iowa; State University of Iowa College of Medicine, 1882; past president of the Palo Alto County Medical Society; formerly on the staff of the Palo Alto Hospital; aged 72; died, May 14, in a hospital at Rochester, Minn., of shock, following a prostatectomy.

**Harold St. George Clarke,** St. John, N. B., Canada; McGill University Faculty of Medicine, Montreal, Que., 1917; formerly acting superintendent of St. John County Hospital, East St. John; aged 38; died, April 2, at St. John Infirmary, following an operation for perforated gastric ulcer.

**Charles A. Niles,** Dawsonsprings, Ky.; Hospital College of Medicine, Louisville, 1898; member of the Kentucky State Medical Association; postmaster of Dawsonsprings; aged 56; died, May 16, in the Presbyterian Hospital, Chicago, of brain abscess following a frontal sinus infection.

**Ross M. Reagan,** Monon, Ind.; Medical College of Indiana, Indianapolis, 1896; member of the Indiana State Medical Association; past president of the White County Medical Society; aged 57; was found dead in the bathtub, May 19, of an incised wound, presumably self-inflicted.

**Jonathan Wright** ✠ Pleasantville, N. Y.; Medical Department of Columbia College, New York, 1883; member of the American Association of Pathologists and Bacteriologists; aged 68; died, May 26, at the Neurological Institute, New York, of cerebral embolism.

**Andrew H. Fabrique,** Wichita, Kan.; Northwestern University School of Medicine, Chicago, 1905; member of the Kansas Medical Society; Civil War veteran; aged 92; formerly on the staff of St. Francis Hospital, where he died, May 10, of cerebral thrombosis.

**Robert Finley Ringland** ✠ Montclair, N. J.; Columbia University College of Physicians and Surgeons, New York, 1903; formerly on the staff of the Mountainside Hospital; aged 48; died, May 21, at Colorado Springs, Colo., of pulmonary hemorrhage.

**Franklin S. Sampson,** Penn Yan, N. Y.; Hahnemann Medical College of Philadelphia, 1882; aged 77; died, May 9, at the Thompson Hospital, Canandaigua, as the result of injuries received when the automobile in which he was driving was struck by a train.

**Joseph Bieber** ✠ New York; Columbia University College of Physicians and Surgeons, New York, 1900; member of the American College of Physicians; on the staff of the People's Hospital; aged 50; died, May 16, of coronary embolus and pulmonary infarct.

**Benjamin E. Le Master** ✠ Bushnell, Ill.; University of Illinois College of Medicine, Chicago, 1904; formerly on the staffs of St. Francis Hospital and the Holmes Hospital, Macomb; aged 50; died, May 24, at Macomb, of cerebral hemorrhage.

**Matthew Joseph Fitzpatrick** ✠ Mason City, Iowa; Northwestern University Medical School, Chicago, 1909; city health officer; served during the World War; aged 42; on the staff of St. Joseph's Mercy Hospital, where he died, May 20, of nephritis.

**Charles Percy Kemp,** Baltimore; College of Physicians and Surgeons, Baltimore, 1895; member of the Medical and Chirurgical Faculty of Maryland; aged 59; died, April 8, at the Sydenham Hospital, of facial erysipelas and lobar pneumonia.

**Joseph Benedict Neubeiser** ✠ Toledo, Ohio; St. Louis University School of Medicine, St. Louis, 1921; aged 37; died, May 29, in a hospital at Monroe, Mich., as a result of fractured cervical vertebrae, sustained in an automobile accident.

**Antonino Scaturro,** Brooklyn; University of Palermo, Italy, 1900; Eclectic Medical College of the City of New York, 1901; member of the Medical Society of the State of New York; aged 53; died, May 20, of inguinal carcinoma.

**Walter W. Graham,** College Grove, Tenn.; Vanderbilt University School of Medicine, Nashville, 1898; member of the Tennessee State Medical Association; aged 59; died, May 23, of pneumonia, following influenza.

**George Washington Julian,** Tifton, Ga.; Southern Medical College, Atlanta, 1887; member of the Medical Association of Georgia; past president of the Tift County Medical Society; aged 70; died, May 29, of cholecystitis.

**Francois John Theodorus Was,** Paterson, N. J.; College of Physicians and Surgeons, Chicago, 1903; member of the Medical Society of New Jersey; served during the World War; aged 47; died, May 10, of pneumonia.

**Walter Claude Moore,** Alpine, Texas; University of Tennessee College of Medicine, Memphis, 1900; for three years health officer of the Presidio district; aged 53; died, March 20, at the Masonic Hospital, El Paso.

**James Johnson Williams** ✠ Weatherford, Okla.; College of Physicians and Surgeons, Chicago, 1893; past president and secretary of the Custer County Medical Society; aged 60; died in May, at a hospital in Clinton.

**Alfred Ascher,** Milwaukee; St. Louis University School of Medicine, 1912; veteran of Spanish-American War; on the staff of the Milwaukee Hospital for Insane; aged 50; died, April 28, of chronic nephritis.

**Simon Robert Schultz** ✠ New York; Eclectic Medical College of the City of New York, 1899; Long Island College Hospital, Brooklyn, 1909; aged 52; died, May 26, following an operation for appendicitis.

**William T. Knox,** White Hall, Ill.; Missouri Medical College, St. Louis, 1896; member of the Illinois State Medical Society; aged 60; died, May 18, at St. John's Hospital, Springfield, of diabetes mellitus.

**Porter Mixon,** Prichard, Ala.; Tulane University of Louisiana School of Medicine, New Orleans, 1918; member of the Medical Association of the State of Alabama; aged 35; died, May 14, of erysipelas.

**James Francis Morgan,** Brooklyn; Long Island College Hospital, Brooklyn, 1868; member of the Medical Society of the State of New York; Civil War veteran; aged 90; died, May 30, of heart disease.

**Moses Cornelius Stone,** Wellesley, Mass.; Medical Department of the University of City of New York, 1868; member of the Massachusetts Medical Society; aged 86; died, May 20, of myocarditis.

**Camden P. Pence** ✠ Dallas, Texas; Baylor University College of Medicine, Dallas, 1915; instructor in clinical medicine at his alma mater; aged 48; died, May 16, of carcinoma of the breast.

**William James Mercer** ✠ Pittsfield, Mass.; Harvard University Medical School, Boston, 1894; on the staff of St. Luke's Hospital; aged 56; died suddenly, in May, of chronic myocarditis.

**Oliver J. Taylor,** Wichita, Kan.; Hahnemann Medical College and Hospital, Chicago, 1890; formerly member of the city council; aged 74; died, May 15, in Indianapolis, of cerebral hemorrhage.

**Austin W. Hobart,** Chicago; Hahnemann Medical College and Hospital, Chicago, 1894; aged 57; died, May 19, of an infection following a scratch on the thumb inflicted four months ago.

**Irwin Agnew Detchon,** Crawfordsville, Ind.; University of Pennsylvania School of Medicine, Philadelphia, 1876; aged 78; died, May 28, at St. Vincent's Hospital, Indianapolis, of anemia.

**Joseph Leo Gallagher,** Steelton, Pa.; University of Pennsylvania School of Medicine, Philadelphia, 1894; served during the World War; aged 60; died, May 7, of heart disease.

**James McSmith,** Hot Sulphur Springs, Colo.; St. Louis College of Physicians and Surgeons, 1921; aged 45; died, April 23, of injuries received in an automobile accident.

**N. T. Carswell,** Macon, Ga.; College of Physicians and Surgeons, Baltimore, 1886; member of the Medical Association of Georgia; aged 67; died, May 1, of angina pectoris.

**Howard Valmore Halbert,** Pasadena, Calif.; Rush Medical College, Chicago, 1921; member of the California Medical Association; aged 31; died, January 11, of pneumonia.

**John Simpson Niles,** Pownal, Vt.; Syracuse (N. Y.) University College of Medicine, 1873; aged 81; died suddenly, May 17, of heart disease, while attending a patient.

**Bernard Gerson Katz** ✠ Chicago; College of Physicians and Surgeons, Chicago, 1903; on the staff of the North Chicago Hospital; aged 47; died, May 31, of pneumonia.

**John L. Wentz,** Scranton, Pa.; University of Pennsylvania School of Medicine, Philadelphia, 1882; aged 69; died, April 1, at the Scranton State Hospital, of heart disease.

**Lee Emerson McCartney** ✠ Coraopolis, Pa.; University of Pittsburgh School of Medicine, 1924; aged 31; died, April 17, of pneumonia, following influenza.

**James Dick Bridger,** Memphis, Tenn.; George Washington University Medical School, Washington, D. C., 1902; aged 56; died, May 9, at Bolivar.

**J. Frank Rayburn** ✠ Bonham, Texas (registered, Texas, under the Act of 1907); on the staff of the S. B. Allen Memorial Hospital; died, May 19.

**Belle Craver Slocum,** Toledo, Ohio; Northwestern University Woman's Medical School, Chicago, 1882; aged 78; died, May 25, of senile dementia.

**Dorsey Frederick Emmert,** Avoca, Iowa; Jefferson Medical College of Philadelphia, 1891; aged 64; died, May 17, as the result of paralysis.

**Rolla Wesley Thornberg,** Toledo, Ohio; Cleveland University of Medicine and Surgery, 1895; aged 69; died, May 26, of chronic nephritis.

**Barney LaFayette Underwood,** Bristol, Tenn.; Meharry Medical College, Nashville, 1916; aged 36; died, May 24, of heart disease.

**Benjamin K. Snodgrass,** Union City, Ind.; Curtis Physio-Medical Institute, Marion, 1885; aged 66; died, May 28, of heart disease.

**Duncan H. Selph,** Stillwater, Okla.; University of Tennessee College of Medicine, Memphis, 1891; aged 69; died, May 19, of pneumonia.

**James Mathew Thornber,** Carthage, Ill.; Keokuk (Iowa) Medical College, 1895; aged 61; died, May 22, of cerebral hemorrhage.

**Edward F. Weeks,** La Grange, Ky.; Louisville Medical College, 1886; aged 67; died, May 22, as the result of a cerebral hemorrhage.

**John Rankin Alford,** Hico, Texas (licensed, Texas, under the Act of 1907); Civil War veteran; aged 94; died, April 1, of senility.

**Albert C. Berry** ✠ Chicago; Medical College of Ohio, Cincinnati, 1876; aged 76; died, May 27, of myocarditis and nephritis.

# *Queries and Minor Notes*

ANONYMOUS COMMUNICATIONS and queries on postal cards will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

## "OLD RAL"—A SYNONYM FOR SYPHILIS

*To the Editor:*—Will you please give me the origin of the expression "Old Ral" used by the laity as a synonym for syphilis?

R. B. MCVAY, Kansas City, Kan.

ANSWER.—Several suggestions have been offered as to the origin of this term. One suggests that "Ral" must be an abbreviation for "Ralph," as compared with "Hal" and "Henry." Ralph occurs in the literature in the sense of mischief maker. In that case "Old Ral" would be the old mischief maker, as compared with the term "Old Harry."

The question was also referred to Mr. H. L. Mencken, author of American Language. He writes:

"'Old ral' was very familiar in Baltimore in my early days, but I have been unable to find any reference to it in the dictionaries of slang. One of them, Ware's 'Passing English of the Victorian Era,' says that 'ral' is a naval term for admiral. Perhaps the use of 'old ral' originated in the navy. I know of no one likely to have any better information about the history of the word. Very little work has been done in the American language. A few pedagogues who have written on the subject have confined themselves to protests against its grammatical looseness."

## MANAGEMENT OF CANCER OF THE CARDIA WITH ESOPHAGEAL OBSTRUCTION

*To the Editor:*—In THE JOURNAL, May 5, page 1498, is a question with reference to the management of cancer of the cardia with esophageal obstruction. In the answer it is stated that the only effective palliation that can be offered is gastrostomy. In many instances palliation can be afforded for long periods of time by the mechanical dilation of the stricture. Gastrostomy not only carries a considerable operative risk, but the results obtained are very disappointing. It is true that dilation is more apt to give relief when the lesion is essentially esophageal, but a gastrostomy should never be done when the lesion is essentially gastric in origin. If an opening is made in the alimentary canal below the growth, jejunostomy is the operation of choice because I have seen cases in which there was either an implant in the abdominal wound from the gastric lesion or direct extension through the gastrostomy opening, making the patient extremely miserable.

P. P. VINSON, M.D., Rochester, Minn.

## PANCREATITIS NOT REVEALED ROENTGENOGRAPHICALLY

*To the Editor:*—I have been asked to give an opinion about the demonstrability of chronic pancreatitis by the roentgen rays. Looking over the textbooks I have not been able to find any comment on this subject, and I wonder whether you can give me some information pertaining to the question. Please omit name.

M.D., West Virginia.

ANSWER.—In simple chronic pancreatitis, roentgen rays are practically useless as a diagnostic aid. Once in a great while there are calculi which show. Cysts and tumors of the pancreas may often give pronounced shadows, mainly because the mass encroaches on the duodenum and neighboring viscera.

## PAIN IN AMPUTATION STUMP

*To the Editor:*—I have a patient whose leg was amputated about four years ago above the knee. There is a place where the flesh is drawn in at the end of the stump. The cause of amputation was diabetes and gangrene. My patient suffers frequently with great pain in the stump, jerks and trembling in the stump and a pain which he explains as a burning sensation, although he cannot locate the exact spot of the pain in the stump. What can be done to avoid it? Please omit name.

M.D., New York.

ANSWER.—From the description of the physical appearance of the amputated stump—contraction of the scar tissue at the end of the stump—and from the nature of the symptoms—severe pain in the stump with jerkings and trembling and burning sensations—one of two conditions seems to be indicated: (1) the presence of a neuroma, or (2) the catching of the end of a nerve in the contracted scar tissue. Repeated examinations usually enable one to locate the most constant pain point or point of tenderness. Treatment consists of carefully dissecting out this contracted scar and searching for either a small neuroma or a nerve involved in the scar. Locating the nerve and cutting it off from 1½ to 2 inches above the end of the stump nearly always relieves this condition.

### SODIUM IODIDE FOR PYELOGRAMS

*To the Editor:*—Do you consider that there is any danger from using 10 per cent sodium iodide for kidney injections following kidney functional tests for pyelograms? Are there any cases on record of a necrosis of the kidney pelvis warranting the discontinuing of the practice for diagnostic purposes? Kindly omit my name! M.D., Kansas.

ANSWER.—Sodium iodide, as used for making pyelograms, carries with it little, if any danger. A pyelogram may be made after functional tests have been made. In many clinics these two diagnostic procedures are carried out at the same sitting. Regarding the question of necrosis of the kidney with sodium iodide or sodium bromide, there is practically no danger of producing necrosis of the kidney pelvis. Cases have been reported in which infarction occurred in the old days when silver such as collargol was used.

### LENGTHENING OF ACHILLES TENDON IN CLUBFOOT

*To the Editor:*—I have a case of clubfoot in a child of 8 years. In one foot corrective work has been done on the achilles tendon; the other foot was given a chance to correct itself, which it is not doing. The family is especially anxious to avoid operation. Is there any accepted physical or mechanical therapy for tight achilles tendons?

R. E. TERRY, M.D., Cuba City, Wis.

ANSWER.—In a boy 8 years it is often possible to stretch the achilles tendon, or, properly speaking, to tear out the fibers of the triceps surae muscle, although the process is spoken of as tendon stretching. The probabilities are that the tendon does not stretch. However, it is probably advisable that the tendon should be lengthened by one of the recognized types of open operation.

### EDEMA — MYRTILLIN — CHRONIC SYNOVITIS — EFFECTS OF SODA ON VITAMINS

*To the Editor:*—1. What could cause swelling of a leg in a woman, aged 75: The other leg is not edematous. She has always lived in New England. There is no kidney disturbance, and the heart is normal. She has (chronic) arthritis deformans but otherwise seems unusually well. The swelling has been present only three or four weeks. There is no sign of varicose veins. Possibly she has a venous thrombosis. What else might the condition be? 2. Is myrtillin being used for diabetes? Is it on the market? 3. What can be done for a chronic synovitis following a knee strain? What is considered the best treatment for an acute knee strain? 4. Does the addition of a little soda injure the vitamins in orange juice? KENNETH CHURCHILL, M.D., Lebanon, N. H.

ANSWER.—1. The edematous swelling described might readily arise from a local circulatory disturbance resulting from venous thrombosis, phlebitis, deep varicose veins, or pressure on the veins from a pelvic tumor. The following might also be mentioned as possible causes: arterial disease, cellulitis, periostitis, osteomyelitis, extensive interference with the lymphatic circulation, or bone tumors. Local toxic edema or anaphylactic edema would not seem to come into question in this case.

2. Blueberry leaf extract, also called Myrtillin, has been used experimentally only and is not on the market (Preliminary Report of the Council on Pharmacy and Chemistry, THE JOURNAL, Nov. 5, 1927, p. 1607).

3. Whenever a chronic synovitis follows a knee strain the possibility always exists that the condition may be a beginning tuberculous synovitis. This must be ruled out by roentgenologic examination and by guinea-pig inoculation of the aspirated contents of the joint. These effusions should always be promptly aspirated. It is necessary, also, to rule out the presence of a periodically dislocating semilunar cartilage, one or more joint mice, hypertrophied synovial villi, lipoma arborescens, and hemophilia.

Aspiration should be repeated as often and as frequently as the effusion recurs. Walking should be limited but not entirely interdicted. Strapping or encircling bandages should not be applied except in cases in which the lateral ligaments are relaxed. The patient should actively bend the knee daily, and this is best done while he is seated on a chair. Daily baking of the joint is of great value and should be combined with massage to the muscles.

Contrary to the old teaching, which advocated immobilization treatment for acute knee strain—i. e., acute synovitis of the knee joint—today the best treatment is found to be repeated aspirations, followed by active motion, including walking. This treatment was developed by Willems during the World War, and even earlier, but its general acceptance was one of the lessons learned from extensive war experience. Willems says: "It is now some years since my attention was directed to this problem [traumatic joint effusions], and I have freed myself by degrees from practicing the law of immobilization. I have commenced with evacuatory punctures to drain traumatic effusions of the knee, hemarthroses and hydrarthroses, and by making the patient walk immediately. Not only could they do this without any difficulty, but their lesions were cured in a few days without leaving any trace. My method of treating traumatic effusions by puncture, followed by immediate movements, was rapidly adopted by practitioners, dealing with industrial accidents, owing to the great rapidity and perfection of the recovery and also owing to its great simplicity."

4. This question cannot be answered categorically. Orange juice contains some vitamin A; a considerable quantity of the complex hitherto described as vitamin B (which is now believed to include at least two separate factors F and G, or $B_1$ and $B_2$), and a liberal amount of the antiscorbutic vitamin C. These have a varying stability toward heat, depending on the particular factor in question, the presence of air or oxygen, the reaction—or hydrogen ion concentration—of the solution in which the vitamin occurs, the rate of heating and the temperature involved. If "a little soda represents an amount insufficient to change the reaction of the juice to one of outspoken alkalinity, and if the juice should be subjected at most for a brief period to the added ingredient at room temperature, it is unlikely that serious deterioration would take place. Vitamin A seems to resist the action of even strong alkalis, as it is still present in the unsaponifiable residues resulting from the treatment of vitamin-bearing oils with hot caustic soda. Vitamins B and C are sensitive to the action of alkalis. Perhaps our correspondent can discover the proper answer to his query through his own interpretation of the amount of alkali represented by "a little soda."

### TRANSMISSION OF RABIES VIRUS

*To the Editor:*—I have a question for which I cannot find a satisfactory answer and wish to ask your help in solving. A cow was bitten by a rabid dog and the milk was used for three weeks by the family before they knew that the cow had the rabies, as diagnosed by the veterinary. Would there be any source of infection from using the milk? Would you advise rabies serum for the family? Any information or literature on the subject will be duly appreciated.

E. D. STANDLY, M.D., Brookfield, Mo.

ANSWER.—So far as known at present a solution of continuity in the skin or mucous membrane is necessary for the absorption of the virus of rabies in human beings. It seems to be generally accepted that the virus cannot pass through the healthy skin, and it certainly is exceedingly doubtful whether the virus can be absorbed through the digestive tract. It is not known whether in a rabid cow the virus passes into the milk. From the report of the case mentioned by our correspondent, it is not clear whether the milk was used for three weeks before the outbreak of symptoms on the part of the cow. In any case, it probably is safe to conclude that the danger from using the milk was so small as to be practically negligible, but if there is the slightest doubt on this score preventive injection of rabies vaccine—not serum—can be made at once.

### SANITATION OF WELLS

*To the Editor:*—Please state the best method of ridding a well or spring of *B. coli*, giving the simplest and most practical procedure.

W. W. WARD, M.D., Alexander, Ark.

ANSWER.—The best method of treating a spring or well water supply is by chlorination. However, such treatment is likely to be expensive for a small supply. If the well or spring is being continuously polluted, it is usually more practical to abandon the supply and look for a noncontaminated source.

### VIRUS FOR EXTERMINATING RATS

*To the Editor:*—How is a virus for exterminating rats made? There are several such viruses on the market, as Liverpool virus, Ratin and Danysz, all claiming to kill the rats by causing an epidemic—I think typhoid—among the rats and killing them in this way. As these commercial viruses were of no avail in killing the rats in our hospital, we should like to prepare such a virus in our own laboratory.

M.D., Roumania.

ANSWER.—The rat viruses on the market contain the organism of so-called mouse typhoid. This organism belongs to the paratyphoid group. While it is not known to be of high pathogenicity for man, it cannot be recommended for use around kitchens or other places where it is likely to come in contact with food or food containers or the hands of persons serving food. Spray (THE JOURNAL, Jan. 9, 1926, p. 109) has reported an outbreak of food poisoning traced to a rat virus. A culture of mouse typhoid organism can be obtained through the American Type Collection, 637 South Wood Street, Chicago.

## OVALTINE

*To the Editor:*—"Ovaltine" has become a cure-all preparation. The laymen are taking it for a variety of conditions and, if one could depend on the reports made by enthusiastic users, you would believe that it has very great value. Will you kindly give me the exact composition of this much vaunted preparation? Unfortunately, diabetic patients are using it and I have the impression that it has a high carbohydrate content.

WILLARD C. STONER, M.D., Cleveland.

*To the Editor:*—I have been inclined when I received queries regarding "Ovaltine" to condemn it on general principles, as I know that most of these advertised things are not what they are claimed to be. Can you give me a tip on the composition and usefulness of this product.

G. H. HEALD, M.D., Washington, D. C.

*To the Editor:*—Have you at your disposal, any information as to the composition or effects of "Ovaltine," a preparation which is much advertised and about which a number of patients have asked me?

OLGA S. HANSEN, M.D., Minneapolis.

ANSWER.—According to the manufacturer, Ovaltine "is a concentration of the nutritive constituents of malt, milk and eggs, flavored with cocoa." In other words, the product is essentially a chocolate-flavored malted milk to which has been added a small amount of dried egg substance. The company gives the following chemical composition of Ovaltine:

| | | |
|---|---|---|
| "Protein | 14.2 | per cent |
| "Fat | 8.01 | per cent |
| "Carbohydrates | 67.9 | per cent |
| "Ash | 3.76 | per cent |
| "Organic Phosphorus (Calculated as $P_2O_5$) | 1.18 | per cent" |

According to the manufacturers, this "new pick-up drink from Switzerland" originated in Berne over thirty years ago. From the same source we learn that Ovaltine has an energy value of 1,864 calories to the pound. The amount of Ovaltine recommended for a glassful is two teaspoonfuls or more. Two heaping teaspoonfuls of Ovaltine would produce about 50 calories. A glass of milk has an energy value of 170 calories.

Ovaltine has been widely recommended as a product "that brings quick, restful sleep" and so much has this feature been stressed that the majority of the inquiries THE JOURNAL receives ask whether or not Ovaltine contains a hypnotic drug. It does not, of course; its power to induce sleep is similar to that of other warm drinks taken just before retiring.

## TOXICITY OF NOVARSENOBENZOL (NEOARSPHENAMINE)

*To the Editor:*—I have had several more or less serious toxic accidents with the intravenous injection of Novarsenobenzol Billon, manufactured by the Powers-Weightman-Rosengarten Company of Philadelphia, but only when using 0.75 Gm. ampules. The original packages did not show signs of having been opened. Does exposure to the sun or heat affect the contents of the ampule? I have a female patient, with frank signs of tertiary syphilis, who had paraplegia a few days after receiving an injection of 0.75 Gm. Kindly omit my name.

M.D., Arizona.

ANSWER.—With regard to the effect of exposure to the sun or to heat, New and Nonofficial Remedies states in the article on Neoarsphenamine, ed. 1928, pp. 75-76, "The drug may undergo deterioration in the ampule, and care should be exercised to use the drug of normal color. This drug should preferably be kept in a cool dark room and be not more than 6 months old."

As to the varying toxicity of different brands, it may be said that all brands of neoarsphenamine are licensed for sale by the U. S. Treasury Department and thus should be of satisfactory quality. We do not know of any conclusive evidence that the product of any particular manufacturer deserves preference above that of another.

## USELESSNESS OF LIVER EXTRACTS IN SIMPLE ANEMIA

*To the Editor:*—I have a patient suffering from what appears to be a simple anemia. Constitutionally she has always been below par, having had poliomyelitis in infancy. Has the new liver extract any favorable influence in such cases?

M.D., Iowa.

ANSWER.—Up to the present time the ordinary liver extracts employed for the treatment of pernicious anemia have not been found to exercise any beneficial effect on other types of anemia. Berglund has recently observed that liver extract given to normal persons causes a prompt rise in the total number of red blood cells, so that the total number in circulation may rise to 6, 7, or even 8 million per cubic millimeter. According to Berglund this effect is temporary, as after a certain length of time the polyglobulia falls off and the total number of cells per cubic millimeter of blood subsides again until it reaches more nearly the normal level. He suggests that the blood picture of pernicious anemia may be due to the inability on the part of the blood-forming organs to complete or liberate enough red blood corpuscles to carry an adequate amount of hemoglobin through the circulation, and that the pallor of the blood in pernicious anemia is due to a lack of the necessary shells or packages in which to carry the hemoglobin rather than to any primary inability on the part of the body to produce hemoglobin itself. The reader will recall the relatively small number of red blood cells in the average case of pernicious anemia and their relatively high color, suggesting that as much use as possible is made of such red blood cells as can be completed and launched into the circulation. In other types of anemia the difficulty may lie not so much in the inability to build and launch the necessary number of red blood corpuscles into the blood stream as in an impairment of the power to produce hemoglobin. In any event, the suggestion is of interest and serves as an explanation of the fact that the liver extracts ordinarily used in the treatment of pernicious anemia have not been observed to have any definite beneficial effect on other types of anemia.

Replying directly to our correspondent's question, one would say that the liver extracts now in use for the treatment of pernicious anemia would probably not have any favorable influence on the case he describes. It may be noted in this connection that Berglund reported at the recent meeting of the Association of American Physicians a beneficial action on anemias other than pernicious anemia from feedings of fetal liver. It is still too early to state how much benefit, if any, might be expected from such a procedure in a case of the type here described.

## FOCI OF INFECTION AS CAUSES OF DISEASE

*To the Editor:*—An editorial in THE JOURNAL several months ago made a statement to the effect that certain diseases had been proved to have their etiology definitely established as chronic foci of infection. Would you be so kind as to tell me what diseases are so considered by the more conservative observers? The editorial in which this statement was made was entitled "Do We Remove Too Many Teeth?"

LOUIS A. MITCHELL, M.D., Newark, Ohio.

ANSWER.—Any one seriously interested in focal infection should read the critical review of the whole subject by W. L. Holman (*Arch. Path.* **5**: 68 [Jan.] 1928). It probably is safe to say that conservative observers would regard at least certain forms of the following conditions as the result of focal infection: arthritis, especially chronic forms; endocarditis, especially the subacute form; iritis; myositis, and neuritis. But no attempt will be made to cover the ground completely at this time.

## TREATMENT OF ODOROUS DISCHARGE FROM CHRONICALLY INFECTED SINUS

*To the Editor:*—What is the best application for lessening the odor of foul discharging sinuses as from an old osteomyelitis which refuses to heal after repeated operations?

WILLIAM H. RENDLEMAN, M.D., Davenport, Iowa.

ANSWER.—The foul discharge is, of course, due to necrosis of the bone, and until this process is eliminated, it is practically impossible to remove the foul odor. A dilute solution of hydrogen peroxide (1 part solution of hydrogen peroxide in 5 parts of water), or a potassium permanganate solution (1:1,000 or 1:2,000) may be used. Proper removal of the necrotic bone should result in the disappearance of the foul odor.

## TREATMENT OF INDUSTRIAL DERMATITIS DUE TO PARA YELLOW

*To the Editor:*—I have a patient who was poisoned by a substance called yellow para, which is used in making chrome orange. Ever since he was poisoned four years ago, a dermatitis of the face and a generalized furunculosis develops each spring. Could his present trouble be due to his contact with yellow para four years ago? What treatment would you suggest?

GEORGE R. MAGEE, M.D., Yerington, Nev.

ANSWER.—A number of dyes and pigments of entirely different composition are given the name of chrome orange.

Inorganic chrome orange is a lead chromate prepared by a combination of lead acetate, sodium or potassium bichromate and caustic soda. This pigment has been the source of industrial lead poisoning, and the intermediate sodium or potassium bichromate has been the source of industrial dermatoses.

The organic dye chrome orange is para-nitrobenzene-azo-salicylic acid. In this preparation para-nitro-aniline and salicylic acid represent intermediate stages.

The term para yellow is applied to a group of pigments that are azo-direct dyes for development with di-azotized para-nitro-aniline. It is believed from the statement in the query

that para-nitro-aniline may be the offending irritant. This substance is capable of producing a distressing, burning, itching dermatitis, as well as systemic poisoning.

It is becoming well established that the harmful changes produced by some industrial skin irritants provoke the skin to become persistently responsive to practically any skin irritant, even though the exposure to the original severe irritant no longer exists. This has led to the term sensitized skin, although it is not established that this sensitization is closely akin to protein sensitization. A better concept is that the resistance of the skin has been so reduced as to afford ready opportunity for the action of mild irritants that in a normal skin would prove to be harmless. The increased exposure to the ultraviolet rays of sunlight during the spring and summer months is a possible explanation of the recurrence mentioned. Skins that have been injured by severe attacks of industrial dermatitis are readily involved in the action of foci of infection and in the harm produced by improper diet.

At this stage, treatment especially directed to the combating of the action of para yellow is probably uncalled for. Efforts should be made to build up the general resistance of the patient, to locate and eliminate possible foci of infection, and to prevent unnecessary exposure to irritants.

## *Medical Education, Registration and Hospital Service*

### COMING EXAMINATIONS

ALABAMA: Montgomery, July 10. Chm., Dr. S. W. Welch, 519 Dexter Ave., Montgomery.

CALIFORNIA: San Francisco, July 9. Sec., Dr. Chas. B. Pinkham, 908 Forum Bldg., Sacramento.

COLORADO: Denver, July 3. Sec., Dr. Philip Work, 324 Metropolitan Bldg., Denver.

CONNECTICUT: Hartford, July 10-11. Sec., Reg. Bd., Dr. Robert L. Rowley, 79 Elm St., Hartford. Sec., Homeo. Bd., Dr. E. C. M. Hall, 82 Grand Ave., New Haven.

DELAWARE: Wilmington, June 19-21. Sec., Dr. Henry W. Briggs, 1026 Jackson St., Wilmington.

DISTRICT OF COLUMBIA: Washington, July 10. Sec., Dr. E. C. Copeland, Suite 110, 1801 Eye St., Washington.

HAWAII: Honolulu, July 9-12. Sec., Dr. James A. Morgan, Honolulu.

ILLINOIS: Chicago, June 26-29. Supt. of Regis., Mr. V. C. Michels, Springfield.

INDIANA: Indianapolis, June 19. Sec., Dr. E. M. Shanklin, 421 State House, Indianapolis.

KANSAS: Kansas City, June 19. Sec., Dr. Albert S. Ross, Sabetha.

MAINE: Augusta, July 2-3. Sec., Dr. Adam P. Leighton, Jr., 192 State St., Portland.

MARYLAND: Baltimore, June 19-22. Sec., Reg. Bd., Dr. Henry M. Fitzhugh, 1211 Cathedral St., Baltimore.

MASSACHUSETTS: Boston, July 10-12. Sec., Dr. Frank M. Vaughan, 144 State House, Boston.

MICHIGAN: Detroit, June 18-20. Sec., Dr. Guy L. Connor, 707 Stroh Bldg., Detroit.

MINNESOTA: Minneapolis, June 19-21. Sec., Reg. Bd., Dr. A. E. Comstock, 524 Lowry Bldg., St. Paul.

MISSISSIPPI: Jackson, June 20-22. Sec., Dr. F. J. Underwood, Jackson.

MISSOURI: St. Louis, July 17-19. Sec., Dr. James Stewart, Capitol Bldg., Jefferson City.

NEBRASKA: Omaha, June 21-23. Sec., Reg. Bd., Mr. Lincoln C. Frost, Lincoln.

NEW JERSEY: Trenton, June 19-20. Sec., Dr. Chas. B. Kelley, 30 W. State St., Trenton.

NEW YORK: New York City, Albany, Syracuse and Buffalo, June 25-28. Sec., Dr. Harold Rypins, Educational Bldg., Albany.

NORTH DAKOTA: Grand Forks, July 3. Sec., Dr. G. M. Williamson, Grand Forks.

OREGON: Portland, July 10-12. Sec., Dr. M. K. Hall, 816 Pittock Block, Portland.

PENNSYLVANIA: Philadelphia and Pittsburgh, July 10-14. Dir., M. C. D. Koch, Harrisburg.

RHODE ISLAND: Providence, July 5-6. Sec., Dr. B. U. Richards, State House, Providence.

SOUTH CAROLINA: Columbia, June 26. Sec., Dr. A. Earle Boozer, 505 Saluda Ave., Columbia.

SOUTH DAKOTA: Mitchell, July 17. Sec., Dr. H. R. Kenaston, Bonesteel.

TEXAS: Austin, June 19-21. Sec., Dr. T. J. Crowe, 918-919 Mercantile Bank Bldg., Dallas.

UTAH: Salt Lake City, July 2. Dir., Mr. M. H. Welling, 412 State Capitol Bldg., Salt Lake City.

VERMONT: Burlington, June 27-29. Sec., Dr. W. Scott Nay, Underhill.

VIRGINIA: Richmond, June 19-22. Sec., Dr. J. W. Preston, Box 444, Roanoke.

WASHINGTON: Seattle, July 16. Dir., Reg. Bd., Mr. Charles Maybury, Olympia. Basic Science Bd., July 12. Dir., Mr. Charles Maybury, Olympia.

WEST VIRGINIA: Martinsburg, July 10. Sec., Dr. W. T. Henshaw, Charleston.

WISCONSIN: Milwaukee, June 26-28. Sec., Reg. Bd., Dr. Robert E. Flynn, La Crosse. Sec., Basic Science Bd., Prof. M. F. Guyer, University of Wisconsin.

## SOME FACTS ON POSTGRADUATE STUDY IN VIENNA

MAXWELL FINEBERG, M.D.
MONTREAL

Since the publication of my communication[1] early this year, I have received numerous requests for more detailed information on the subject of postgraduate work abroad. Unfortunately the information available in America on this subject is very vague, and as the number of English-speaking physicians coming to Vienna is constantly increasing, a concise outline of what is offered will undoubtedly be of interest to many. I feel that I am qualified to give an unbiased opinion on the subject as a result of having spent more than a year, to date, in Europe, during the last six months of which I have held the office of secretary of the American Medical Association of Vienna. In this period of time it was my duty to answer about 400 requests for information, most of which requested information should have been available in America.

### CONDITIONS IN VIENNA

The following outline is based on the work obtainable only in Vienna. Before discussing the actual academic aspect, a brief description of living accommodations would probably be in order. Vienna today is probably the cheapest large central European city to live in, but this fact should not be construed as meaning that living in Vienna is cheap. It is reasonable but not cheap. One can live just as well for less in many a small city in the United States. A single room in a pension costs from $12 to $16 a month. A single room in a small hotel, which is much more convenient because of central heating and running water, costs from $25 to $35 a month. Full pension, that is, room and three meals a day, is available for from $60 in a pension house to $85 in the small hotels. To live and eat decently one should allow from $60 to $85 for room and food. Diversions in Vienna are also reasonable, but to attempt to set down any definite figures would be futile because of the great divergence in individual taste. Suffice it to say that fair seats for the opera are obtainable at about $2; seats for concerts at about $1, and seats for the movies at about $0.35. My opinion, based on my own experience and that of friends, has been that a single man should allow $150 for living and sundries, apart from the cost of the medical work. Some have been able to live on $100 and others say that they require $200 or more; therefore $150 is a fair average.

Postgraduate instruction in Vienna is in progress throughout the whole year. Many letters of inquiry ask what is the best time of year to come to Vienna. As the courses are arranged to start as soon as the required number have signed to take them, there need be very little difficulty in choosing the time of year. However, the experience of the American Medical Association of Vienna has been that the attendance is usually slightly lower in December, January and April, so that these months may be said to be the dullest with reference to the amount of time needed to get started at work. In the case of more persons signing for a course than can be accommodated, the preference is given according to priority in registration. In this way, a newcomer may find himself "bumped" off courses at the start. Nevertheless, it seldom takes more than a week for one to obtain as much work as he wishes to undertake on his time-table, and the bumping rule seldom works any severe hardships.

Concerning the cost of medical work, there is such a variation in the evaluation in dollars and cents that it is extremely

1. Fineberg, Maxwell: Postgraduate Study in Europe, J. A. M. A. **90**: 137 (Jan. 14) 1928.

difficult to arrive at any definite figures. One doing surgery or a surgical specialty finds that the most expensive courses are those in which cadavers are used. Such courses are limited to two pupils, who divide the cost of about $5 an hour.

Didactic courses are usually unlimited or open to ten students, each student paying a pro rata share of about $5 an hour. Some of the best didactic work I had was obtained at a cost of $0.18 an hour. To obtain a fair average of what one should allow for medical work through the American Medical Association of Vienna, the cashier of that organization was asked for an opinion. He stated that a fair average for a physician doing medicine or a medical specialty would be about $100 a month; for surgery or a surgical specialty, about $200 a month. I feel that these figures are a little high, but the cashier is in a better position to give a worth-while opinion. A fact which must be kept in mind while discussing this particular topic is that a physician who spends only two or three months in study naturally finds his monthly average higher than the one who spends a year or more. So much for the cost of living and education in Vienna.

A question that was repeatedly asked in the letters of inquiry was whether a knowledge of the German language was essential to one contemplating postgraduate study in Vienna. The answer is that the German language is not essential as the courses are given in English. A knowledge of German is preferable and convenient in eliciting a first-hand history from patients, but it is not essential. It is an excellent opportunity, however, for English-speaking physicians to learn the language while studying in Vienna. Good tutors are available for about $0.75 an hour, and the acquisition of a language is always facilitated if one studies in the land where the language is spoken.

Another question frequently asked, particularly by younger men, is whether or not there are opportunities to earn a little money in Vienna while pursuing medical work. The answer is decidedly no. There are about 250,000 Austrians out of work in the city. Instances of foreigners earning their living in Vienna, while attending to medical studies also, are very rare.

### EDUCATIONAL FACILITIES

The preceding paragraphs answer, for the most part, general questions about conditions in Vienna. Now for a discussion of the academic aspect. The following opinion concerning general medicine, surgery and all the specialties, with the exception of otolaryngology, is based on impressions gathered in informal discussions with English-speaking physicians studying in Vienna during the past year. It is my conception of the average opinion, and as such, allows for much leeway. No attempt is made to single out any one subject, teacher or group of teachers for criticism.

*Pathology.*—The amount of available material is tremendous. The subject is taught in such a way that most physicians are highly pleased with what is offered. Special pathology, as well as general pathology, is presented in didactic courses and demonstrations. For those desiring only pathology, there are limited facilities for obtaining internships of about one year's duration.

*Internal Medicine.*—Bedside diagnosis and didactic clinical courses are excellent. Laboratory methods are not as much used as in America, and less reliance is placed on them. Treatment is quite different from that taught in America and the opinion is that treatment in America receives more consideration than in Vienna or, for that matter, in Europe. This holds true not only for internal medicine but for almost all branches of medicine and surgery. I have often heard the opinion that, for one already established as an internist, Vienna has much to offer in pathology and diagnosis; but the beginner must look elsewhere for the other parts of his specialty.

*General Surgery.*—In this field, Vienna has its best to offer in pathology, anatomy and pathologic anatomy and cadaver surgery. In the other parts of surgical training the opinion is that America can offer more and in a better way than Vienna. Here, again, the surgeon who has had a large experience finds that Vienna has much to offer, but the beginner wishing to learn surgery finds that there is much that is lacking in Vienna for him.

*Obstetrics.*—The opinion is that the teaching of this subject is as well or better organized in America.

*Gynecology.*—The same can be said of this specialty as of general surgery. Nonsurgical therapy can be just as well obtained in America as in Vienna.

*Pediatrics.*—This subject is well organized for teaching. It is one of the best taught specialties in Vienna for both the beginner and the experienced pediatrician.

*Ophthalmology.*—Good didactic and clinical courses, particularly in external diseases, are offered. Cadaver surgery is also available. The teaching of refraction is a little weak. The teaching staff has been badly depleted in the last few years and new men are now being trained to refill the vacancies.

*Neurology and Psychiatry.*—Teaching facilities are excellent. Physicians coming to Vienna are usually well satisfied with the work in this specialty.

*Urology.*—The opinion of the men who have worked in this branch in Vienna and also in other European cities is that Paris and Budapest have as much to offer as Vienna, if not more.

*Dermatology.*—Material is plentiful but rather few dermatologists come to Vienna for postgraduate work.

*Radiology and Fluoroscopy.*—This specialty ranks among the best for teaching purposes in Vienna. Physicians in this specialty are usually very well satisfied with the work that is offered them.

*Orthopedics.*—This specialty also ranks very high. The Viennese methods in orthopedics are considered excellent, and the only criticisms heard have been good ones.

*Otorhinolaryngology.*—This specialty is undoubtedly the best organized one in Vienna for teaching purposes. About 35 per cent of the physicians and surgeons coming to Vienna come for this particular specialty. There are more well trained instructors teaching in this line than in any other, probably for the reason that there is a greater demand for instruction in this field. The amount of clinical material is tremendous, and work under supervision and instruction is available in all the big hospitals and clinics. The didactic courses as well as the practical ones are excellent. More than 50 per cent of the work on cadavers in Vienna is done in ear, nose and throat. In this specialty, as in most others, conservative office or clinic treatment is neglected to some extent, as compared with American methods.

Vienna has more to offer the student wishing to learn this specialty than it has to almost any other. The only things lacking to one wishing a complete training in otorhinolaryngology are conservative treatment, as already mentioned, and actual operative experience. Unfortunately, the therapeutic measures used in the huge Vienna clinics will not suffice for either American office or hospital use.

It is against the Austrian laws for a foreigner to perform surgical operations in Austria; nevertheless, after an outsider has spent several months in a clinic, he is usually allowed to do some of the commoner nose and throat operations under strict supervision. The bigger operations and

mastoidectomies are not available in Vienna except on the cadaver.

One particular part of the specialty deserves individual mention. The opportunities in America for obtaining actual experience in endoscopy are rather limited. It is true that excellent courses are offered, but the actual passing of the bronchoscope and esophagoscope is taught mainly on animals and cadavers. This is not so in Vienna, where the material is plentiful. The beginner may pass the instrument on actual patients as often as six or seven times in his first ten-hour course. After some experience has been gained, private courses may be arranged whereby two patients may be treated with the bronchoscope or esophagoscope during the hour and even endoscopic therapy may be entrusted to the student.

All branches of medicine and surgery are taught in Vienna but space does not permit a more complete enumeration. The training afforded in Vienna, as outlined in this brief article, cannot be said to be complete in itself. Coates of Philadelphia has rightly said that in America the system of intern training in surgery and the surgical specialties tends to produce a mechanical operator. A famous Budapest professor has said that every surgeon must know what, why, when and how before he operates. On this basis, an American training followed by Viennese postgraduate work would seem to be an excellent solution.

62 St. James Street.

### Illinois January Examination

Mr. V. C. Michels, superintendent of registration of the Illinois Department of Registration and Education, reports the written and practical examination held at Chicago, Jan. 10-12, 1928. The examination covered 10 subjects and included 100 questions. An average of 75 per cent was required to pass. Of the 48 candidates examined, 37 passed and 11 failed. Nineteen physicians were licensed by reciprocity and 6 physicians were licensed by endorsement of their credentials. The following colleges were represented:

| College | PASSED | Year Grad. | Number Passed |
|---|---|---|---|
| University of Colorado School of Medicine | | (1926) | 1 |
| Chicago Medical School | | (1927, 3), (1928) | 4 |
| Northwestern University Medical School | | (1927) | 5 |
| Rush Medical College | | (1925), (1927, 11) | 12 |
| University of Illinois College of Medicine | | (1928) | 10 |
| Johns Hopkins University School of Medicine | | (1926) | 1 |
| Creighton University School of Medicine | | (1916), (1926) | 2 |
| University of Toronto Faculty of Medicine | | (1922) | 1 |
| University of Naples, Italy | | (1921) | 1 |

| College | FAILED | Year Grad. | Number Failed |
|---|---|---|---|
| Chicago College of Medicine and Surgery | | (1916) | 1 |
| Chicago Homeo. Medical College | | (1900) | 1 |
| Chicago Medical College | | (1926), (1927, 3) | 4 |
| Miami Medical College, Cincinnati | | (1903) | 1 |
| Meharry Medical College | | (1919) | 1 |
| University of Toronto Faculty of Medicine | | (1920) | 1 |
| University of Berlin, Germany | | (1924) | 1 |
| University of Königsberg, Germany | | (1913) | 1 |

| College | LICENSED BY RECIPROCITY | Year Grad. | Reciprocity with |
|---|---|---|---|
| Northwestern University Medical School | | (1917) | Minnesota |
| State University of Iowa College of Medicine | | (1924), (1926) | Iowa |
| University of Louisville School of Medicine | | (1925) | Kentucky |
| Johns Hopkins University School of Medicine | | (1922) | Maryland |
| Harvard University School of Medicine | | (1924) | Michigan |
| University of Michigan Medical School | | (1904) (1921), (1924, 2), (1925) | Ohio Michigan |
| University of Minnesota Medical School | | (1926) | Minnesota |
| St. Louis University School of Medicine | | (1926) | Missouri |
| Meharry Medical School | | (1923), (1926) | Tennessee |
| Vanderbilt University School of Medicine | | (1899) (1915) | Alabama Iowa |
| University of Toronto Faculty of Medicine | | (1924) | Michigan |
| German University of Prague, Czechoslovakia | | (1903) | Wisconsin |

| College | ENDORSEMENT OF CREDENTIALS | Year Grad. | Endorsement with |
|---|---|---|---|
| Northwestern University Medical School (1927) U. S. Navy | | (1926) | N. B. M. Ex. |
| Rush Medical College | | (1927, 3) | N. B. M. Ex. |
| University of Michigan Medical School | | (1924) | N. B. M. Ex. |

## Book Notices

PYELOGRAPHY: ITS HISTORY, TECHNIQUE, USES AND DANGERS. By Alex. E. Roche, M.A., M.D., M.Ch., Chief Assistant to a Surgical Unit, St. Bartholomew's Hospital. With an introduction by Sir John Thomson-Walker, O.B.E., M.B., C.M., Senior Urologist and Lecturer on Urology, King's College Hospital. Cloth. Price, $3.50. Pp. 118, with 16 illustrations. New York: William Wood & Company, 1927.

The introduction by Sir John Thomson Walker to this small book of scarcely a hundred pages strikes the keynote in regard to this modern method of urologic diagnosis. Three points stressed by him will bear verbatim quotation.

> I may be permitted to lay stress on three points. The method is not one for the occasional dabbler in cystoscopy. There are dangers connected with pyelography that make it desirable that only those practiced in the use of the cystoscope and accustomed to the delicate manipulations necessary for ureteral catheterization should undertake the work.
>
> The second point is that a pyelogram, when obtained, must be read by the experienced eye if grave mistakes in interpretation and consequently in operation are to be avoided.
>
> The third point is that only those cases should be submitted to pyelography in which the information desired could not be obtained equally well by other less severe methods of examination. The temptation to obtain a fine demonstration must be subordinate to the interests of the patient.
>
> But when this has been said, no one can deny that in pyelography we have a method of examination by which early diagnosis is made with astonishing accuracy. And, as a result, it has a very important influence on the success of operation in this department of surgery and on the conservative surgery of the kidney.

The contents of the book merit careful reading by any one interested in urologic diagnosis. The author is to be complimented on the keenness of his observation and the excellence of his interpretations. The most striking thing is that, with a small material for study, the author has been able to develop a truly judicial attitude toward his subject. The details of possible reactions and complications after pyelography is excellently described. In chapter IV, all the contraindications to pyelography are briefly outlined, but number 6 on page 48 seems to be especially important and should have a restraining effect on the haphazard use of this method of diagnosis.

> It should hardly be necessary to include among the contraindications to pyelography the necessity of omitting it where the diagnosis, whether of stone, hydronephrosis, tubercle or growth, etc., is determinable by other methods. A desire to save the patient unnecessary discomfort should be reinforced in the case of tubercle and growth, by fear of disseminating the disease. These contraindications apply with double force to the performance at one sitting of bilateral pyelography, which, however, though not advisable as a routine, may, in their absence, and where comparison of the two sides is essential, be safely attempted in a young or middle-aged patient in whom the pyelogram of one side has proved normal, and the fluid injected has been aspirated.

The illustrations are well chosen and are materially amplified by the legends. This is an excellent book throughout and, while by no means an atlas or reference volume, fulfils exactly what the author intended for it. This small book is devoid of any chaff and the kernel of the subject occupies every page between the two covers.

HANDBUCH DER INNEREN SEKRETION. Eine umfassende Darstellung der Anatomie, Physiologie und Pathologie der endokrinen Drüsen. Lieferung 4. Band III. Herausgegeben von Dr. Max Hirsch. Paper. Price, 36 marks. Pp. 839-1284, with illustrations. Leipsic: Curt Kabitzsch, 1928.

This is the concluding section of the third volume with the general heading of clinical pathology and therapeutics of the endocrine glands. The present section contains a concluding chapter on goiter and cretinism by Dr. Eggenberger; a chapter on parathyroids by Dr. Peritz; a chapter on diseases of the vegetative nervous system by Dr. Leschke, and a final chapter on the significance of endocrine processes in psychosis and neurosis by Dr. Cimbal. The chapters on goiter and cretinism and on the parathyroids are on the whole excellent. The chapter on diseases of the vegetative nervous system is less satisfactory. The concluding chapter is the anticlimax. To be sure, it is difficult to construct something of value out of two fields with so many unknowns as the field of endocrine disturbances and the field of psychoneurosis, but by mixing these ingredients with a plethora of verbiage, Dr. Cimbal has produced something that here and there borders on the absurd and the monstrous. For example, that "massage, faradic stimulation, sun and heat baths invariably stimulate the sympathetic-hormonal mechanisms."

This statement, so far as our present knowledge is concerned, appears to be a product of psychoneurosis. Furthermore, Dr. Cimbal outlines a whole list of organotherapeutic preparations, some of them multiglandular ("lipolysin," containing thyroid, hypophysis, pancreas and gonads) as therapeutic measures in psychoneurosis. For example, preparations of the pineal body are indicated in masturbation, migraine, spastic constipation and arterial hypertension. Preparations of the anterior lobe of the hypophysis are said to be indicated in hereditary syphilis; posterior lobe extract (pituitary) to be of value in renal calculi, asthma, amenorrhea and puerperal sepsis; thymus gland extract in rachitis and chlorosis, and suprarenal cortex in vagotonia (whatever that term implies). Such variations in excellence and reliability in one volume are probably partly unavoidable in books by multiple authors, each author assuming, of course, responsibility only for his own particular chapter. A valuable and useful bibliography is appended at the end of each chapter. In the case of the chapter by Dr. Eggenberger on goiter and cretinism, the bibliography contains sixteen pages of references. Dr. Eggenberger's chapter is also excellently illustrated with photographs.

ELEMENTARY BACTERIOLOGY. By Joseph E. Greaves, M.S., Ph.D., Professor of Bacteriology, Utah Agricultural College, and Ethelyn O. Greaves, M.S. Cloth. Price, $3.50. Pp. 506, with 129 illustrations. Philadelphia: W. B. Saunders Company, 1928.

This volume is apparently intended as a textbook of general bacteriology. The first few chapters serve as an introduction and are entertainingly written while at the same time giving the student a sufficient historical background. The next chapters deal with bacteria and their properties. These are followed by discussions of the applications of bacteriology to agriculture, public health and medicine. The important bacterial diseases are included. The book contains a sufficient amount of material for the elementary student and omits details which are of interest only to the more advanced worker. It is a pleasure to recommend this textbook.

CLINIQUES DERMATOLOGIQUES. Deuxième série. Par Dr. L. Brocq. Paper. Price, 70 francs. Pp. 660, with illustrations. Paris: Masson & Cie, 1927.

In his preface the author states that thirty-seven of the fifty-eight clinics in this volume have not been previously published. The work is divided as follows: generalities, general therapeutics, true morbid entities and cutaneous reactions, ending with a comprehensive survey of the palmar and plantar keratodermias. Among the subjects treated are a general conception of the dermatoses, the objective and clinical syndromes, the microbic eruptions and gout, hygiene of the scalp, the external treatment of skin diseases, the intertriginous lesions in the female, the autotraumatic skin conditions, the lichenifications, dyshidrosis and the dyshidrosiform eruptions, the frontiers of lichen planus, contribution to the etiology of pityriasis rosea, parapsoriasis, the problem of the alopecia areatas and the atrophic alopecias. Anything by Brocq, because of his vast experience plus an unusually sagacious clinical sense, is worthy of close attention. In addition to a large amount of practical information, there is much food for thought in his classification of the dermatoses. The chapter on treatment is excellent. All in all, this is a worthy companion to the first series of Brocq's Clinics, and it can be warmly recommended to all who are interested in dermatology.

MUSCLE FUNCTION. By Wilhelmine G. Wright. With a foreword by J. Playfair McMurrich, Professor of Anatomy, University of Toronto. Cloth. Price, $3.50 net. Pp. 188, with 26 illustrations. New York: Paul B. Hoeber, Inc., 1928.

The author was associated with the late Dr. Robert W. Lovett for eighteen years, in charge of muscle training work. Much of Lovett's writings in the field of infantile paralysis and scoliosis were based on her work. She presents in this book a scientific discussion, giving much credit to Beevor's Croonian Lectures on Muscular Movements. It is an excellent exposition of the subject which should be read and followed by every one interested in medical gymnastics, infantile paralysis and scoliosis. It should be of great value to the neurologist and the orthopedic surgeon.

NOTES ON THE EPIDEMIOLOGY OF ENTERIC FEVERS IN THE FEDERATED MALAY STATES. By William Fletcher, M.D., M.R.C.P. Bulletin from the Institute for Medical Research, Kuala Lumpur, Federated Malay States No. 4. Paper. Pp. 7. Kuala Lumpur: Federated Malay States Government Printing Office, 1927.

This brief paper deals chiefly with the results of laboratory diagnosis of gastro-intestinal fevers in the Federated Malay States. The authors conclude, judging from the results of this inquiry, that typhoid is uncommon and paratyphoid rare. The isolation of specific bacilli was found much more truly diagnostic than the results of the Widal test.

OUTLINES OF NURSING HISTORY. By Minnie Goodnow, R.N., Directress of Nurses, Hospital of the Graduate School of Medicine, University of Pennsylvania. Fourth edition. Cloth. Price, $3 net. Pp. 472, with 139 illustrations. Philadelphia: W. B. Saunders Company, 1928.

This, as its outline specifies, is a textbook for pupil nurses. The system of paragraph headings and particularly the chapter summaries are good, especially for teaching purposes. The foreword gives much sound advice to pupils. Throughout the book a nice balance is maintained, so that a student is not left with the thought that nursing in former times was quite barbarous and present nursing is nearly perfection. It constantly keeps nursing before the student as a service for humanity and not merely as an occupation. The book contains too many comparatively unimportant names and dates of too many nursing leaders and events for a preliminary or even an advanced student of the subject to attempt to digest.

PRAKTISCHE ORTHOPÄDIE. Von Dr. A. Schanz, Dozent für Orthopädie an der Akademie für ärztliche Fortbildung in Dresden. Paper. Price, 42 marks. Pp. 560, with 504 illustrations. Berlin: Julius Springer, 1928.

The same criticism applies to this book as applies to most of the foreign books on orthopedic surgery, especially the German. It seems that they all have the same old chestnuts in photographs, before and after operation. Moreover, they seem to forget, or never knew, that there is such a thing as American orthopedic surgery. By this is included orthopedic surgery as taught and practiced in the United States and Canada. They also seem to forget that there are also English, Italian and French schools of orthopedic surgery. Many unusual cases with excellent results are illustrated. The book illustrates well the author's method of performing an osteotomy by means of bone pins.

DIABETES: Its Treatment by Insulin and Diet. A Handbook for the Patient. By Orlando H. Petty, A.M., M.D., F.A.C.P., Professor of Diseases of Metabolism, Graduate School of Medicine, University of Pennsylvania. Fourth edition. Cloth. Price, $2 net. Pp. 155, with 9 illustrations. Philadelphia: F. A. Davis Company, 1928.

This is enlarged over previous editions. The book has the same function as other "little" diabetic books written for and to the patient. This particular volume may be somewhat too detailed, so as to cause confusion. Some of the facts (pp. 36 and 58) are not always demonstrable as such. The food tables are excellent.

DIE BEHANDLUNG DER GIFTSUCHTEN, ALKOHOLISMUS, MORPHINISMUS, KOKAINISMUS USW. Mit einem Anhang: Die gesetzliche Behandlung der Giftsuchten. Von Dr. Ernst Joël. Paper. Price, 5 marks. Pp. 118. Leipsic: Georg Thieme, 1928.

This small volume on the treatment of drug addictions is essentially an abbreviation of the "Kocainismus" by Joël and Fränkel. In addition to cocainism there are sections on morphinism, alcoholism and the coffee, tobacco and barbital habits. For one content with a superficial view of these conditions, this work will be found useful. For those who wish an exhaustive and complete treatise, it will be a disappointment.

BACTERIOLOGY AND SURGERY OF CHRONIC ARTHRITIS AND RHEUMATISM WITH END-RESULTS OF TREATMENT. By H. Warren Crowe, D.M., B.Ch., M.R.C.S., and Herbert Frankling, C.B.E., M.R.C.S. Cloth. Price, $9. Pp. 187, with illustrations. New York: Oxford University Press, 1927.

A notable attempt has been made by Crowe to simplify the classification of chronic arthritis on a pathologic and etiologic basis. His discussion of foci of infection opens the way to much further research, though it is quite possible that the teeth have been overemphasized in this regard as contrasted with other organs. Crowe's two most important contributions are on the bacteriology of osteoarthritis, which he believes to be due

V 90
1928

to streptococci, and of rheumatoid arthritis, for which he claims staphylococci as the etiologic factor. The evidence is not convincing for either claim. His attempts at classification and differentiation of the streptococci and staphylococci are noteworthy, but one would feel more favorably inclined were the differentiation in the former based to a greater extent on factors other than Crowe's medium. And bacteria which so constantly change in their biologic reactions must be viewed with considerable skepticism as forming distinct varieties. His work on vaccine therapy reopens a field which encourages the hope that this method may in time prove an important agent in the care of patients with arthritis. Frankling's chapter on surgical treatment is a conservative statement of the operative methods sometimes applied to chronic arthritis and the results that occur.

HEILBRIGDISSKÝRSLUR (PUBLIC HEALTH IN ICELAND), 1921-1925. Samdar eftir skýrslum hjeradslækna ad tilhlutun heilbrigdisstjórnarinnar. With an English summary. Paper. Various pagination. Reykjavik, Iceland: G. S. Jörnson, 1927.

This report is divided into three parts, which are paged separately. Fortunately there is an adequate English summary which gives a good idea of the scope and nature of the report. There are phases of the report that will be of special interest to health officers and students of public health.

THE DISPOSAL OF SEWAGE. A Text-Book for the Use of Engineers, Sanitary Inspectors and Students. By T. H. P. Veal, B.Sc., A.M.I.C.E., Lecturer in Civil Engineering at the University of Birmingham. Cloth. Price, $4.25. Pp. 173, with 48 illustrations. New York: D. Van Nostrand Company, 1928.

The fundamentals of sewage treatment are discussed from the standpoint of English practice. This differs little in principle from American practice, although most English communities deal with a much more concentrated sewage because of a lower water consumption. The book is a valuable one for students.

GYNECOLOGY FOR NURSES. By Harry Sturgeon Crossen, M.D., F.A.C.S., Professor of Clinical Gynecology, Washington University Medical School. Cloth. Price, $2.75. Pp. 281, with 365 illustrations. St. Louis: C. V. Mosby Company, 1927.

To one who has taught gynecology to nurses, this book seems to offer great assistance to the nurse. The first part concerns anatomy, physiology and methods of examination. This is followed by an extensive treatise on gynecologic treatment. Perhaps a little too much space is allotted to surgical treatment, for it is not necessary for the nurse to be so intimately aquainted with surgical methods. The chapter on gynecologic diseases is excellent, and gives the nurse a compact idea of the various conditions encountered. The second part of the book covers gynecologic nursing. It is comprehensive, covering every detail, preoperative, operative and postoperative. The book is excellently illustrated, making it easy for the nurse to follow the text.

THE ABDOMINAL SURGERY OF CHILDREN. By L. E. Barrington-Ward, Ch.M., F.R.C.S., Surgeon, Hospital for Sick Children, Great Ormond Street. Cloth. Price, $4.50. Pp. 283, with illustrations. New York: Oxford University Press, 1928.

Surgery in children is vastly different from that in adults. Though an adult may safely be treated as a child, the converse is not true. With this concept in view, the author has written an excellent little book, for those who deal with the surgical problems of infancy and childhood only occasionally, as well as for those who confront them daily. Essentially the book consists of complete monographic discussions of surgical diseases occurring in the abdomen, such as pyloric stenosis, intussusception, appendicitis, tuberculosis, intestinal neoplasms and Meckel's diverticulum. The chapter on preoperative and postoperative treatment, including complications, is full of excellent advice based on the large experience of a surgeon with mature judgment. This is also evident throughout the book whenever the author's personal opinions are expressed. The work is definitely down to date. At the end of each chapter is a short bibliography with references to the American, French and German, as well as English literature, by no means complete yet sufficient for any one who desires to study the subject further. The book is well written. It is not an exhaustive work yet is clear and complete. It contains a comparatively large number of good illustrations. Altogether, it serves its purpose well.

## Books Received

Books received are acknowledged in this column, and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. Selections will be made for more extensive review in the interests of our readers and as space permits. Books listed in this department are not available for lending. Any information concerning them will be supplied on request.

THE PHYSICIAN THROUGHOUT THE AGES. A Record of the Doctor from the Earliest Historical Period—Embracing a General Survey of the Practice of Medicine—The Social History of the Doctor—With Medical Chronology and Biographies of Outstanding Physicians. (To be issued in 2 volumes). Volume I. By Arthur Selwyn-Brown, B.Sc., M.A., Ph.D., assisted by Distinguished Medical Specialists. Leather. Price, $25 per set of 2 volumes. Pp. 848, with illustrations. New York: Capehart-Brown Company, Inc., 1928.

First volume of a subscription work, the strangest, most peculiar, and impossible work on medical history on which these old eyes have been permitted to gaze.

A MANUAL OF THE PRACTICE OF MEDICINE. Prepared Especially for Students. By A. A. Stevens, A.M., M.D., Professor of Applied Therapeutics in the University of Pennsylvania. Twelth edition. Cloth. Price, $3.50 net. Pp. 657, with 16 illustrations. Philadelphia: W. B. Saunders Company, 1928.

New edition of a popular handbook of internal medicine.

THE PRINCIPLES AND PRACTICE OF OBSTETRICS. By Joseph B. De Lee, A.M., M.D., Professor of Obstetrics at the Northwestern University Medical School. Fifth edition. Cloth. Price, $12 net. Pp. 1140, with 1128 illustrations. Philadelphia: W. B. Saunders Company, 1928.

Continued improvement of what seemed already to be the ultimum in obstetric textbooks.

UEBER DAS PROBLEM DER BÖSARTIGEN GESCHWÜLSTE. Eine experimentelle und theoretische Untersuchung. Von Professor Dr. Lothar Heidenhain. Paper. Price, 28 marks. Pp. 153, with 141 illustrations. Berlin: Julius Springer, 1928.

Presentation of author's research to prove infectious origin of some malignant growths.

GONOCOCCAL URETHRITIS IN THE MALE. For Practitioners. By P. S. Pelouze, M.D., Associate in Urology and Assistant Genito-Urinary Surgeon at the University of Pennsylvania. Cloth. Price, $5. Pp. 357, with 78 illustrations. Philadelphia: W. B. Saunders Company, 1928.

Textbook based on modern scientific urologic methods.

GICHT UND RHEUMATISMUS. Ein Lehrbuch für Ärzte und Studierende. Von Dr. F. Gudzent, a. o. Professor an der Universität Berlin. Paper. Price, 12.80 marks. Pp. 189, with 41 illustrations. Berlin: Julius Springer, 1928.

Summary of our knowledge of gout and rheumatism.

AN EXPERIMENTAL STUDY OF AFFECTS AND ASSOCIATIONS DUE TO CERTAIN ODORS. By J. H. Kenneth, M.A., Ph.D. Psychological Monographs, No. 171, 1927. Paper. Price $1. Pp. 64. Princeton: Psychological Review Company, 1927.

Proving that odors may bring up memories.

A TEXT-BOOK OF GENERAL BACTERIOLOGY. By Edwin O. Jordan, Ph.D., Professor of Bacteriology in the University of Chicago and in Rush Medical College. Ninth edition. Cloth. Price, $6 net. Pp. 778, with 191 illustrations. Philadelphia: W. B. Saunders Company, 1928.

New edition of an authoritative text.

HEALTH AND WEALTH. A Survey of the Economics of World Health. By Louis I. Dublin, Ph.D., Statistician Metropolitan Life Insurance Company. Cloth. Price, $3. Pp. 361. New York: Harper & Brothers, 1928.

Figures by a leading figurer in the health field.

TRANSACTIONS OF THE AMERICAN SURGICAL ASSOCIATION. Volume the Forty-Fifth. Edited by John H. Jopson, M.D., Recorder of the Association. Cloth. Pp. 516, with illustrations. Philadelphia: William J. Dornan, 1927.

SKLEROSE UND HYPERTONIE DER INNERVIERTEN ARTERIEN. Von Gustav Ricker, Direktor der pathologischen Anstalt der Stadt Magdeburg. Paper. Price, 10.50 marks. Pp. 193. Berlin: Julius Springer, 1927.

MEDICAL CONFERENCE ADDRESSES IN COMMEMORATION OF THE OPENING OF THE NEW DAIREN HOSPITAL, 1927. Paper. Pp. Various pagination. Dairen: Dairen Hospital, 1927.

REPORT OF THE PUBLIC HEALTH AND HOSPITAL DEPARTMENT OF WESTERN AUSTRALIA FOR THE YEARS 1925 AND 1926. Paper. Pp. 43, with illustrations, Perth, 1928.

THE LLOYD LIBRARY AND ITS MAKERS. An Historical Sketch. By Caswell A. Mayo, Ph.M., Phar. D. Cloth. Pp. 72, with illustrations. Cincinnati, 1928.

## Medicolegal

### Justified Changing of Offered Charge for Services

*(Rubin & Cherry Shows, Inc., v. Wagner (Ind.), 158 N. E. R. 626)*

The Appellate Court of Indiana, in affirming a judgment for a balance of $512.50 in favor of plaintiff Wagner, a physician, for professional services rendered in taking care of and treating a person who had been injured while attending a show which was being exhibited at the state fair grounds, says that the complaint was answered in two paragraphs. One was a general denial, and the other alleged that the person injured was injured while watching the show of Ringer's water circus; that the plaintiff had been employed by that company, and that thereafter the plaintiff sent a bill to the water circus for $200, and that later the defendant, out of funds of the water circus, paid the plaintiff $100; that in all the transaction with the plaintiff, the defendant was acting as the agent of the water circus and not otherwise. However, the evidence was sufficient to sustain a finding that the plaintiff was employed by the defendant to render all the necessary medical and professional services in taking care of and treating the injured person. The employment was made through two employees of the defendant and under such circumstances as to warrant an inference that they had full authority to employ the plaintiff and that they did employ him as the agents of the defendant. The Ringer water circus was not mentioned by any one at the time of the employment, and there was nothing to connect that company with the matter until some time after the employment, when the plaintiff at the request of one of the persons who employed him made a bill against the Ringer circus for $200 for services rendered to the injured person, and later the plaintiff received a letter from the Ringer circus for $100. The bill which the plaintiff made to the circus people was, as he testified, made out as he was directed to make it by one of the persons who employed him, and it was directed to the circus people in care of the defendant.

The plaintiff testified that when he was employed it was insisted that he state what he would charge for the services rendered by him, and that after some controversy and objection on his part to naming a definite sum before the services were performed, he told them he would take a chance on it and would do the work for $200 if he was then paid for such work. He was directed to care for the injured person, but he was not then paid for his services, and when he failed to receive his pay he brought suit for the value of his services. The evidence was sufficient to sustain a finding that the person was injured under such circumstances as to render the defendant liable, and that the defendant employed the plaintiff to give him all the medical services necessary to cure him. The fact that the plaintiff made out a bill to the circus company would not prevent a recovery against the defendant. Nor did the fact that such bill was made out for $200 prevent the plaintiff from suing for and recovering the reasonable value of the services. If, as the plaintiff contended, the defendant did not accept his offer to do the work for $200 if paid at once, and did not pay the $200 in advance, but directed him to proceed and give the boy the necessary attention, a recovery might be had for the reasonable value of the services rendered, which was $612.50, while on account of such services the defendant paid the plaintiff $100.

### Religious Beliefs and Insane Delusions About Religion

*(Nalty's Adm'r et al. v. Franzman's Ex'r (Ky.), 299 S. W. R. 585)*

The Court of Appeals of Kentucky, in reversing a judgment which admitted a contested will to probate, says that the only complaint was that the lower court erred in refusing to allow the contestants to introduce proof showing that the testatrix had insane delusions about her religion.

Belief in spiritualism is not evidence of an unsound mind. Many sagacious and normal persons believe in spiritualism. It has never been held by this court that a belief in spiritualism is evidence of mental incapacity to make a will. On the other hand, this court has held that the proof of such a belief is not competent on the question of testamentary capacity. A belief in the doctrines of Mohammed, Confucius, Gautama, Zoroaster, or any other doctrine or religion, may not be offered as evidence on the question of testamentary capacity.

But insane delusions and abnormal beliefs about any religion are competent as evidence on a question of testamentary capacity. A man may be insane about his religion as well as about any other subject. If he believes and practices things in connection with a religion which he accepts and to which a substantial number of people adhere, which things are contrary to the experiences of a normal human life, and contrary to the practices and beliefs of such religion, such beliefs and practices may be shown as proof of mental incapacity. Insane delusions may, and do, exist about religion, and it would be unsound to hold that, if a man was mentally unbalanced about his religion, such mental state, and his acts, words and conduct flowing therefrom, might not be proved as evidence on the question of his testamentary capacity. There is a clear distinction between a religious belief and insane delusions. It may be difficult to separate a religious belief from insane delusions which may grow out of such belief, but the distinction is there. Therefore it is held that proof of religious belief is not competent evidence, but proof of insane delusions about religion is competent evidence, when the mental capacity of a person to make a will is called in question.

Where the conduct and actions of a person making a will were out of harmony with the conduct of persons ordinarily considered sane, evidence of such conduct and actions is admissible. The effect of such testimony may be rebutted, though, by showing that such conduct or actions is in accord with the practices and beliefs of a religion to which a substantial number of people adhere, and when this is done the court should instruct the jury that the evidence of such unusual conduct and actions is not to be taken by the jury as establishing such unsoundness of mind as prevents one making a will, if the jury believes from evidence that such actions are in accord with the practices and beliefs of a religion adhered to by a substantial number of people.

This court in a former opinion in this case (208 Ky. 686, 271 S. W. 1034) held that a belief in spiritualism is not proof of testamentary incapacity. It does not follow that insane delusions based on spiritualism are not competent as evidence to establish such lack of testamentary capacity. The evidence which the contestants proposed to offer tended to establish conduct and actions on the part of the testatrix entirely out of harmony with the conduct and actions of persons ordinarily considered sane, and there was no contrary evidence offered to show that such conduct and actions on the part of the testatrix were in accord with the belief and practices of spiritualism. This being true, the evidence which the court declined to allow the contestants to introduce was plainly admissible, and coupled with such additional evidence as the contestants offered tending to support their contention, plainly entitled them to have their case submitted to the jury.

## Society Proceedings

### COMING MEETINGS

American Association for the Study of Goiter, Denver, June 18-20. Dr. K. W. Kinard, Bryant Building, Kansas City, Mo., Secretary.

American Federation of Organizations for the Hard of Hearing, St. Louis, June 18-22. Miss Betty C. Wright, 1601, 35th Street, N. W., Washington, D. C., Secretary.

American Hospital Association, San Francisco, August 6-10. Dr. Bert W. Caldwell, 18 East Division Street, Chicago, Executive Secretary.

Maine Medical Association, Belgrade Lakes, June 18-20. Dr. B. L. Bryant, 265 Hammond Street, Bangor, Secretary.

National Tuberculosis Association, Portland, Ore., June 18-20. Dr. C. J. Hatfield, Henry Phipps Institute, Philadelphia, Secretary.

Pacific Northwest Medical Association, Tacoma, Washington, July 5-7. Dr. Frederick Epplen, 511 Olive Street, Seattle, Secretary.

South Dakota State Medical Association, Hot Springs, August 7-9. Dr. John F. D. Cook, Langford, Secretary.

Utah State Medical Association, Ogden, June 29-30. Dr. M. M. Critchlow, Boston Building, Salt Lake City, Secretary.

# Current Medical Literature

## AMERICAN

The Association library lends periodicals to Fellows of the Association and to individual subscribers to THE JOURNAL in continental United States and Canada for a period of three days. Issues of periodicals are kept on file for a period of five years only. Requests for issues of earlier date cannot be filled. Requests should be accompanied by stamps to cover postage (6 cents if one and 12 cents if two periodicals are requested). Periodicals published by the American Medical Association are not available for lending, but may be supplied on purchase order. Reprints as a rule are the property of authors and can be obtained for permanent possession only from them.

Titles marked with an asterisk (*) are abstracted below.

### American Heart Journal, St. Louis

**3:** 381-504 (April) 1928

Coarctation of Aorta of Adult Type: I. Complete Obliteration of Descending Arch at Insertion of Ductus. W. F. Hamilton and M. E. Abbott, Montreal.—p. 381.

Id.: II. Statistical Study and Historical Retrospect of 200 Recorded Cases. M. E. Abbott, Montreal.—p. 392. (To be cont'd.)

*Two to One Right Bundle-Branch Block. R. F. Leinbach, Charlotte, N. C., and P. D. White, Boston.—p. 422.

Chronic Myocarditis Without Cardiac Insufficiency: Three Cases. T. S. Hart, New York.—p. 430.

*Blood Vessels in Valves of Normal Human Hearts. S. A. Ritter, L. Gross and M. A. Kugel, New York.—p. 433.

Pulsating Spleen in Aortic Insufficiency. J. Sailer, Philadelphia.—p. 447.

*Paroxysmal Ventricular Tachycardia with Rhythmic Alternation in Direction of Ventricular Complexes in Electrocardiogram. R. S. Palmer and P. D. White, Boston.—p. 454.

*Electrocardiographic Changes in Pneumothorax with Rotated Heart. A. M. Master, New York.—p. 472.

*Electrocardiographic Changes in Case of Severe Carbon Monoxide Poisoning. L. T. Colvin, Detroit.—p. 484.

Dissecting Aneurysm of Aorta Complicating Hypertension. L. T. Gager, Washington, D. C.—p. 489.

Angina Pectoris in Child. L. Levin, Trenton, N. J.—p. 495.

**Bundle-Branch Block.** — The case reported by Leinbach and White showed by electrocardiogram at first two to one and later complete right bundle-branch heart block. No other similar case has been recorded in the literature, but curves of another patient showing the condition and obtained by Dr. Nils Stenström of Sweden are published.

**Blood Vessels in Normal Heart Valves.**—Seven hundred human hearts were studied by Ritter et al. with reference to the existence of blood vessels in the valves. Fourteen normal hearts were found which presented blood vessels in some of the valves. A thorough clinical and pathologic examination failed to reveal that these vessels owed their origin to inflammation.

**Paroxysmal Ventricular Tachycardia.** — Two cases of alternating bidirectional paroxysmal ventricular tachycardia are reported by Palmer and White, with a review of the literature. The new cases reported alternate in cycle length as well as in direction.

**Electrocardiograms in Cases of Pneumothorax.** — The electrocardiograms in seven cases of pneumothorax, five spontaneous and two artificial, are described by Master. In three, and possibly in six of the cases, the changes were significant enough to suggest the presence of myocardial involvement, and yet three of these showed definitely good heart muscle. A prominent S wave in lead I was present seven times—in 100 per cent of the cases; a right axis deviation of the Q-R-S group occurred five times, small amplitude of the Q-R-S group four times, and small T waves three times. Unusually high or low voltage of the S-T segments was present three times; finally, tachycardia was noted three times. All of the cases of right pneumothorax showed a right axis deviation of the Q-R-S group. In pneumothorax, particularly right pneumothorax, a rotation of the heart occurs and probably accounts for the conditions described. Another way of stating the same fact might be to say that the right ventricle comes closer to the frontal leads than ordinarily. Follow-up procedures on two patients, in whom pneumothorax had disappeared, showed a return to a normal electrocardiogram, with a disappearance of the characteristic changes observed in pneumothorax. The most marked electrocardiographic changes occurred with displacement of the mediastinum. It is suggested that the S-T changes noted in acute coronary closures—i. e., the high take-off of the S-T transition period from the Q-R-S group—may be due, at least in a measure, to a rotation of the heart which may occur when a portion of the heart muscle dies. The low voltage of the Q-R-S group and the T waves is probably to be accounted for either by the rotation of the heart or by the fact that air in the chest is a poor conductor for the heart current.

**Electrocardiogram in Case of Gasoline Poisoning.**—Colvin found that the electrocardiogram of a young man, always healthy, taken twenty-six hours after exposure to automobile exhaust gas, suggested temporary injury to the ventricular conducting tissue. The cardiovascular observations, clinically and by electrocardiogram, were normal five days after the poisoning occurred.

### American J. Diseases of Children, Chicago

**35:** 753-954 (May) 1928

Growth Studies of Children with Diabetes Mellitus. J. D. Boyd and M. V. Nelson, Iowa City.—p. 753.

Scarlet Fever: II. Development of Toxin Sensitivity of Skin in Infants: Relation to Antitoxin in Blood. J. V. Cooke, St. Louis.—p. 762.

*Id.: III. Modification of Skin Sensitivity to Toxin as Result of Nonscarlatinal Infections. J. V. Cooke, St. Louis.—p. 772.

*Id. IV. Toxin Production by Hemolytic Streptococci from Nonscarlatinal Infection in Infants. J. V. Cooke, St. Louis.—p. 781.

*Id.: V. Changes in Skin Sensitivity to Scarlatinal Streptococcus Filtrate in Children Following Introduction of Homologous Serums. J. V. Cooke, St. Louis.—p. 784.

Roentgen-Ray Studies on Hearts of Normal Children: II. E. M. Lincoln and R. Spillman, New York.—p. 791.

*Vitamin Requirements of Nursing Young: II. Beriberi Associated with Hemorrhages. B. Sure and S. J. Schilling, Fayetteville, Ark.—p. 811.

*Rheumatic Nodules: Incidence in Rheumatic Infections. K. Merritt, New York.—p. 823.

Roentgenographic Changes in Thorax of Normal New-Born Babies. C. A. Weymuller, A. L. L. Bell and L. Krahulik, New York.—p. 837.

*Metabolism of Undernourished Children: IV. Calcium Metabolism. C. C. Wang, M. Kaucher and M. Frank, Chicago.—p. 856.

Pseudohermaphroidism (Female Type Predominating). J. B. Manning, S. Robinson and N. H. Brush, Santa Barbara, Calif.—p. 862.

Juvenile Tabes Dorsalis: Three Cases. H. A. Rosenbaum, Chicago.—p. 866.

Endocrine Glands in Relation to Infancy and Childhood. L. F. Barker, Baltimore.—p. 872.

Hypertrophies of Infancy and Childhood. A. V. Stoesser, Minneapolis.—p. 885.

Sebastian Oestereicher: ?-1550. J. Ruhräh, Baltimore.—p. 894.

**Skin Sensitivity of Infants to Scarlatinal Streptococcus Toxin.**—Continuing his studies in this field, Cooke found that skin sensitivity to scarlatinal streptococcus filtrate toxin, which was present in only a small number of infants at birth, increased slowly during the first six months and more rapidly during the last half of the first year. It remained high from the second to the sixth year and fell during the school age. Skin tests made with varying amounts of toxin showed similar variations according to the age of the subject.

**Studies on Nonscarlatinal Hemolytic Streptococci.**—In a study of more than 100 apparently well younger children not isolated from one another in a foundling home, Cooke noted that the skin sensitivity to scarlatinal streptococcus filtrate toxin was greatly decreased in this group when compared with that of healthy children of the same ages from isolated homes. In a few of the children so tested the decreased skin sensitivity was apparently due to the immunity accompanying the circulating antitoxin. The incidence of hemolytic streptococci in cultures from the pharynx of the children in the institutional group was much greater than in a control group from isolated homes.

**Hemolytic Streptococci Cause Respiratory Tract Infections.**—Hemolytic streptococci were found by Cooke to be relatively frequent as a cause of infections of the upper respiratory tract in infants, especially of those which involved the ear and mastoid. Culture filtrates from many of these strains gave skin reactions which were apparently identical with those of filtrates from strains of hemolytic streptococci of scarlatinal origin, and which were neutralizable only by serums capable of neutralizing scarlatinal toxin. In filtrates from other strains, the skin reactive substance was not similarly specific and neutralizable.

**Vitamin Requirements of Nursing Young.** — Nursing young suffering with deficiency in vitamin B were found by Sure and Schilling to die with accompanying hemorrhages in the osteogenic tissues. Hemorrhages were also found in certain

of the viscera. Polyneuritic nursing young were found usually to die with their stomachs well distended with curd. The diets on which beriberi or polyneuritis were produced in the nursing young proved entirely satisfactory for maternal welfare and for the growth of nonlactating individuals. It is suggested that deficiencies in vitamin B in infants in this country may be considerably more prevalent than has heretofore been recognized.

**Incidence of Rheumatic Nodules.**—It is commonly believed that rheumatic nodules are seen much less frequently in the United States than in England. Merritt found that 224 patients showing rheumatic infections were observed during the fall, winter and spring of the years 1924 to 1927. Twenty-five children showed nodules, three of them in more than one attack. They appear most frequently in patients with severe cardiac involvement and point to a poor prognosis. There were eight deaths among twenty-five patients under observation. It seems fair to conclude that the incidence of nodules varies in different years, and that it is not a geographic question.

**Calcium Metabolism in Undernourished Children.**—An investigation made by Wang et al. of the calcium metabolism of ten normal and fifty undernourished children showed wide individual variations among both groups, but a slight tendency toward increased calcium storage was noted among the underweight children.

## American J. Obstetrics & Gynecology, St. Louis

**15:** 453-594 (April) 1928


*What the Gynecologist Should Know About Urology. G. L. Hunner, Baltimore.—p. 453.
*Five Years' Activities of Maternity Service, Second (Cornell) Division, Bellevue Hospital. H. Bailey.—p. 462.
*Clinical Use of Ovarian Follicular Hormone: Functional Sterility. J. C. Hirst, II, Philadelphia.—p. 487.
Retroversion. W. R. Cooke, Galveston, Texas.—p. 493.
Immediate Repair of Cervix After Labor. W. C. Danforth, Evanston, Ill.—p. 505.
*Toxicity of Blood Serum Proteins in Eclampsia. A. F. Lash and W. H. Welker, Chicago.—p. 511.
Corpus Luteum Hematoma: Thirty-Two Cases. S. A. Wolfe, New York. —p. 513.
*Case of Fibro-Adenoma of Breast. C. B. Ingraham and P. Hillkowitz, Denver.—p. 521.
Some Disorders of Female Sexual Function of Mental Origin. W. Brown, London.—p. 528.
*Gestation in Monkey (Macacus Rhesus) and Associated Phenomena. C. G. Hartman, Baltimore.—p. 534.
Thirty-Two Cases of Ectopic Pregnancy and Three Suspected Ectopic Pregnancies. E. Allen, Chicago.—p. 540.
Combination of Short Menstrual Cycle and Delayed Coitus as Factor in Sterility. R. Kurzrok, New York.—p. 546.
Ergot Poisoning Postpartum. H. L. Moskowitz, New York.—p. 549.
New Apparatus for Resuscitation of Asphyxiated New-Born Babies. J. Kreiselman, H. F. Kane and R. B. Swope, Washington, D. C. —p. 552.
Pelvimeter for Direct Measurement of True Obstetric Conjugate. J. T. Smith, Jr., Cleveland.—p. 556.
Case of Bicornuate Uterus. E. C. Steinharter and S. Brown, Cincinnati. —p. 558.
Case of Liver Presentation in Seven and a Half Months' Gestation. E. S. Gurdjian, Rochester, N. Y.—p. 560.


**What the Gynecologist Should Know About Urology.**—Hunner stresses the fact that gynecologists must bear in mind that ureteral stricture is one of the most common lesions of the abdominopelvic cavity. By virture of the usual position of the stricture in the lower pelvis and its relations to the pelvic sympathetic nerves, and by virtue of its effects on the renal function, its symptoms are more varied than those of any of the familiar local diseases. It follows that in any obscure train of symptoms involving the abdominal, pelvic or hip regions, ureteral stricture must always be borne in mind. The existence of such obscure symptoms together with others referable to the bladder places a special obligation on the diagnostician to investigate the urinary tract most carefully. The absence of pathologic elements in the urine does not always give the urinary tract a clean bill of health. When any patient, despite one or more pelvic operations, still complains of her original symptoms, it is incumbent on the gynecologist to make a meticulous survey of the urinary tract.

**Analysis of Cornell Maternity Service in Bellevue.**—Bailey analyzes 5,520 obstetric cases, 4,396 indoor and 1,124 outdoor. There were thirty-three obstetric deaths and fifteen deaths from medical or other causes. The causes of death were: puerperal septicemia, eight; eclampsia, eight; toxemia of pregnancy, four; placenta praevia, four; premature separation of the placenta, four; intrapartum hemorrhage, one; postpartum hemorrhage, one; puerperal embolus, two, and ruptured uterus, one. In the 4,396 indoor deliveries there were 137 abortions and 315 premature babies, that is, babies weighing between 1,500 and 2,500 Gm. In the latter group there were eighty-five stillbirths and neonatal deaths, a rate of 27.3 per cent. Toxemia stands foremost as the cause of stillbirths and, including abortions, accounts for 19 per cent of the deaths. Antepartum bleeding stands second with a rate of 15 per cent. Forceps and version deliveries stand third. There were nine monstrosities. Thirty-seven, or 9.1 per cent, of the deaths were attributed to syphilis as the primary cause, but the total death rate of children of syphilitic mothers was 13 per cent. In the 406 deaths, 104, or about 25 per cent, were macerated fetuses. The total death rate, including all stillbirths and neonatal deaths, is 9.2 per cent. The infant death rate on the outdoor service was very low. There were twenty-three stillbirths, ten of which were macerated, and eleven neonatal deaths, two of which were abortions—a total loss of thirty-four infants, or 3 per cent.

**Clinical Use of Ovarian Follicular Hormone.**—Of a total number of seventeen patients reported on by Hirst, five were treated for menstrual disorder primarily, without result in two of the five. Of the twelve potential mothers, six complained of marked reduction in menstruation; yet all were improved, and three of the six conceived following the injections of female sex hormone. Of the six remaining potential mothers who did not show any menstrual reduction, two conceived, giving five pregnancies out of twelve possibilities, one woman conceiving twice.

**Toxicity of Blood Serum Proteins in Eclampsia.** Although the blood serum in eclampsia has been assumed to be more toxic than that in normal pregnancy, Lash and Welker failed to find any experimental evidence of toxicity of the blood serum proteins in the blood of normal and eclamptic women, although injected in large doses intraperitoneally.

**Fibro-Adenoma of Breast in Young Girl.**—The patient reported on by Ingraham and Hillkowitz was not quite 14 years of age. She had not yet menstruated. Suddenly both breasts began to enlarge and within a three months period removal became necessary. The right breast weighed 15 pounds (7 Kg.); the left, 12 pounds (5.5 Kg.). Cross-section of the breasts showed many lobulated tumors; these, on microscopic examination, proved to be multiple fibro-adenomas.

**Length of Gestation in Monkey.**—The length of gestation in the case of *Macacus rhesus* described by Hartman was almost exactly six lunar months. This is the first authentic record of gestation in any primate except the human being. A slight bleeding, presumably from the immature placenta (the "placental sign" of Long and Evans), microscopically demonstrable, occurred from about the fourteenth to the thirty-seventh day of gestation. This phenomenon may furnish a clew to the very early diagnosis of pregnancy in human beings.

## American J. Public Health, New York

**18:** 413-553 (April) 1928


Cancer Control in Massachusetts. G. H. Bigelow and H. L. Lombard, Boston.—p. 413.
Prevalence of Rabies in United States and World. T. B. Rice and N. Beatty, Indianapolis.—p. 421.
Administrative Control of Communicable Diseases. C. L. Scamman, Boston.—p. 429.
Pneumonia Quarantine. H. J. Benz, Pittsburgh.—p. 433.
Resistance to Pneumococcus Infection as Influenced by Breathing of Gas Combustion Products. E. R. Hayhurst, Columbus, Ohio.—p. 439.
Program and Preliminary Results of Committee on Grading of Nursing Schools. C. E. A. Winslow, New Haven, Conn.—p. 448.
Activities of Plankton in Natural Purification of Polluted Water. W. C. Purdy, Cincinnati.—p. 468.
Residual Germicidal Action of Water Treated with Ultraviolet Rays. J. F. Norton, Chicago.—p. 476.
Simplified Procedure in Determining B. Coli in Water (Presumptive Test). W. Litterer, Nashville, Tenn.—p. 491.
Use of Chlorine in Sewage Treatment. H. G. Baity, Chapel Hill, N. C. —p. 499.

## Am. J. Roentgenology & Radium Therapy, New York

**19:** 313-412 (April) 1928

Cathode-Ray and Roentgen-Ray Work in Progress. W. D. Coolidge, Schenectady, N. Y.—p. 313.
Arthritis and Radiotherapeutic Menopause. J. A. Corscaden, New York.—p. 321.
Complications Following Application of Radium to Pelvic Lesions. L. J. Stacy, Rochester, Minn.—p. 323.
Radium in Treatment of Cancer of Cervix Uteri. G. E. Ward, Baltimore.—p. 330.
Radium Treatment of Tonsils and Other Lymphoid Tissue in Throat. F. H. Williams, Boston.—p. 334.
Failure of Cholecystographic Filling in Presence of Acute Pyloric Pathology. E. H. Skinner, I. H. Lockwood and E. R. Deweese, Kansas City, Mo.—p. 340.
Cholecystographic Studies After Administration of Some of Popular Cholagogues. W. H. Stewart and E. J. Ryan, New York.—p. 341.
Diagnosis of Tumors of Kidney Pelvis. A. I. Dodson, J. L. Tabb and A. L. Gray, Richmond, Va.—p. 344.
Metrosalpingography with Aid of Iodized Oil. I. C. Rubin and A. J. Bendick, New York.—p. 348.

## Annals of Internal Medicine, Ann Arbor, Mich.

**1:** 747-860 (April) 1928

Experimental Study of Acquired Resistance of Rabbit's Renal Epithelium to Uranyl Nitrate. W. C. Hunter, Portland, Ore.—p. 747.
Heart Strain: Consequences. M. H. Kahn and S. Kahn, New York.—p. 790.
Polycystic Disease of Kidneys: Two Cases. G. M. Piersol, Philadelphia.—p. 812.
*Chronic Articular Rheumatism of Vertebrae Followed by Progressive Degeneration of Spinal Cord. A. Gordon, Philadelphia.—p. 819.
*Fatality Following Intravenous Use of Ammonium Ortho-Iodoxy Benzoate. B. A. Manace, Ann Arbor, Mich.—p. 825.
Embryohormonic Relations of Suprarenal Cortex to Mesothelial Tissues. R. C. Moehlig, Detroit.—p. 828.
Case of Coronary Occlusion with Complete Heart Block. L. H. Sigler, New York.—p. 835.
Epilepsy Late in Life. O. T. Osborne, New Haven, Conn.—p. 841.

**Vertebral Arthritis with Spinal Cord Degeneration.**—The two cases reported by Gordon are examples of exclusive motor tract involvement which chronologically followed an onset of a rheumatic condition of the vertebrae. The striking feature in these cases is the fact that while all the symptoms indicated a condition found in primary lateral sclerosis, the spasticity which is to be expected by the nature of the localization of the disorder was totally absent. On the other hand, there was no genuine flaccidity; the legs moved slowly and heavily, and the resistance could be overcome. The two cases are not examples of a well developed typical spastic paraplegia which pathologically is characterized by a total degeneration of the pyramidal tracts. Moreover, in spite of the duration of the disease (ten and seven years, respectively) it had not reached the degree of motor degeneration which is found in typical primary lateral sclerosis. The authors conclude therefore that in both conditions the seat of the morbid process is identical but the degenerative process is probably different.

**Fatality Following Intravenous Injection of Amiodoxyl Benzoate.**—At 3 p. m., Manace's patient was given 100 cc. of a 1 per cent solution of amiodoxyl benzoate, N. N. R. (ammonium ortho-iodoxybenzoate), one of the small veins on the dorsum of the hand being used. The time required for administration was about thirty-five minutes. No apparent reaction followed, even the usual complaints of discomfort being absent. The patient was next seen by the intern at 7 p. m., but nothing in particular was noted until about 10 p. m., when she complained to the nurse about not feeling well. A few minutes after this she seemed irrational and her pulse became weak and thready. At 10:10 p. m., she quietly died. This is the first fatality which has been reported following the intravenous use of amiodoxyl benzoate. It is an indication that the drug should be used with discretion.

## Annals of Surgery, Philadelphia

**87:** 481-640 (April) 1928

*Suture of Recurrent Laryngeal Nerve for Bilateral Abductor Paralysis. F. H. Lahey, Boston.—p. 481.
Treatment of Suppuration of Lung. C. Eggers, New York.—p. 485.
Obliterative Operations for Massive Empyema. C. F. Hegner, Denver.—p. 506.
Posterior Mediastinal Abscess Following Suppurative Arthritis of Cervical Vertebrae. L. C. Wagner, New York.—p. 511.
Acute Subpectoral Abscess. H. Milch, New York.—p. 517.
Pulmonary Embolism: Eight Cases. L. S. Hall, Richmond, Utah.—p. 523.
Harelip and Cleft-Palate: Study of 425 Consecutive Cases. W. B. Davis, Philadelphia.—p. 536.
Pseudocarcinoma of Stomach: Four Cases. V. C. David, Chicago.—p. 555.
*Treatment of Ulcer of Stomach and Duodenum. J. L. DeCourcy, Cincinnati.—p. 566.
Intussusception of Small Intestine Into Stomach Through Gastro-Enterostomy Stoma. J. P. Shearer and E. M. Pickford, Washington, D. C.—p. 574.
*Gastrojejunocolic Fistula Following Operations for Duodenal Ulcer. B. R. Shore, New York.—p. 578.
Surgical Intervention in Extra-Uterine Pregnancy: Observations in Treatment of 109 Cases at Pennsylvania Hospital. H. P. Brown, Jr., Philadelphia.—p. 581.
French-Heel Fractures of Tarsal Scaphoid. V. W. M. Wright, Philadelphia.—p. 587.

**Anastomosis of Recurrent Laryngeal for Abductor Paralysis.**—Lahey reports a case of successful direct anastomosis of the right recurrent laryngeal nerve in a case of bilateral abductor paralysis following two months after a subtotal thyroidectomy. A neuroma was found in the nerve at the point at which it was caught in a pale thick scar fixing it to the lateral laryngeal wall. The nerve was freed from the scar, the segment of the nerve containing the neuroma was removed and an end-to-end suture of the nerve was made without difficulty and without tension, two interrupted oiled silk vessel sutures being used.

**Operation for Peptic Ulcer.**—An operation for the treatment of submucosal ulcers of the stomach is described by DeCourcy. It consists essentially of gastro-enterostomy plus cauterization of the ulcer from within the stomach.

**Postoperative Gastrojejunocolic Fistula.**—Shore reports the case of a man, aged 46, who was first operated on three years before for duodenal ulcer. The operation comprised gastro-enterostomy, cholecystostomy, and appendectomy. One year later the gastro-enterostomy was undone and a jejunostomy was performed for a recurrent marginal ulcer. Two years later, or two months prior to the last admission, for reasons unknown, a partial gastrectomy and pylorectomy was done with a gastrojejunostomy of the Polya type and an entero-anastomosis. The patient made an uneventful recovery and was discharged improved. An attack of acute pain in the left upper quadrant of the abdomen again brought the patient to the hospital. A tentative diagnosis of a recurrent marginal ulcer was made. There were no immediate surgical indications, and the patient was in too poor condition for elective surgery. While still being observed and studied in the hospital, the patient went into sudden shock and died about twenty-four hours later. The clinical diagnosis was internal hemorrhage, but this could not be demonstrated at autopsy. The immediate cause of collapse and death was not found. None of the lesions of the abdomen could be implicated.

## Archives of Dermatology & Syphilology, Chicago

**17:** 585-766 (May) 1928

Industrial Dermatoses. H. R. Foerster, Milwaukee.—p. 585.
*Roentgen-Ray Treatment of Acne Vulgaris: End-Results in 191 Cases. J. C. Michael, Houston, Texas.—p. 604.
Impressions of Dermatology in North China. H. L. Keim, Peking.—p. 619.
*Clinical Excretion of Mercury: II. After Intramuscular Injections, Simple and Clean Inunction. H. N. Cole and others, Cleveland.—p. 625.
*Incomplete Form of von Recklinghausen's Disease: Cases. J. J. Eller, New York.—p. 648.
Pellagra: Skin and Mucous Membrane. E. D. Crutchfield, Galveston, Texas.—p. 650.
Urticaria: II. Experimental Wheal Produced on Normal Skin Through Internal Channels. A. Walzer and M. Walzer, New York.—p. 659.
*Concurrent Herpes Zoster and Varicella. J. B. Shelmire and B. Shelmire, Dallas, Texas.—p. 687.
Alopecia Areata and Emotional Stress. W. A. Pusey, Chicago.—p. 701.

**Results of Roentgen-Ray Treatment of Acne.**—Of the 191 patients in whom the end-results of treatment are reported on by Michael, 101 (53 per cent) were cured by one course of treatment; twenty-three (12 per cent) were greatly improved, and sixty-seven (35 per cent) had relapses. Failure to eradicate the disease completely with one course of treatment (ten or more) occurred in twenty-four instances. Twenty of these patients later reported that the disease disappeared after the treatment was discontinued. In no instance in this series has any permanent ill effect from the roentgen ray been seen. The average number of roentgen-ray treatments in the first course was twelve, with an average

total dosage of 2¾ skin units. In the second course, the average number of treatments was five, with an average total dosage of 1 skin unit.

**Clinical Excretion of Mercury.**—The urinary, fecal and total excretion of mercury was studied by Cole et al. in three groups of patients treated with intramuscular injections of mercuric sodium bromide (10 mg. daily), simple inunctions, and inunctions with subsequent removal of excess ointment by benzene. The total amount of mercury excreted in the four weeks' course of injections averaged 21 mg., of which 15 mg. was in the urine. With simple inunctions, the total excretion is about a fifth greater, and with clean inunctions, about a fifth less. After discontinuance of the administration, the excretion continues high for a considerable time. The volume of the urine does not have any constant effect on the urinary excretion of mercury; the fecal excretion tends to vary with weight of the feces. After intramuscular injections of mercury, women excrete more of this drug than men do, presumably because of the higher relative dosage. When the method of inunctions is used, men excrete more than women; this is attributable to more vigorous rubbing; negroes excrete more than white patients (less thorough removal of ointment from hands?). In most patients the salivation depends on the intensity and on the duration of the excretion of mercury, but patients hypersusceptible to stomatitis may develop this condition early, when the excretion level of the mercury is still low.

**Incomplete Form of von Recklinghausen's Disease.**—Eller cites two additional cases of the incomplete form of von Recklinghausen's disease. The patient's paternal grandmother had the same disease without tumors. Her father and two sisters had the disease with tumors. The second patient had tumors but a son and two daughters, who also had the disease, did not. A fourth child did not present pigmentation or tumors, but had a definite lateral dorsal curvature of the spine. The latter condition has frequently been seen in patients with von Recklinghausen's disease.

**Concurrent Herpes Zoster and Varicella.**—During the course of herpes zoster of the right fifth nerve distribution in the case reported by the Shelmires, a generalized, extensive vesicular exanthem closely resembling varicella developed. Singularities of the zoster eruption in this case were the involvement of the right half of the tongue and buccal mucous membrane of the right cheek, and motor paralysis of the right half of the face, infranuclear in type. The generalized eruption following the zoster was extensive, involving the glabrous skin of almost the entire body, the oral mucous membrane not already the seat of zoster lesions and the scalp. Necropsy revealed pathologic changes in the right gasserian ganglion similar to those found in the spinal root ganglion in herpes zoster of dorsal root distribution. The disease could not be transmitted to rabbits by the inoculation of vesicular fluid into their scarified corneas. Fourteen days after the appearance of the zoster in the father, a daughter who had not been exposed to chickenpox developed a clinically typical varicella eruption with lesions of the scalp and mouth.

## Colorado Medicine, Denver

**25:** 129-164 (May) 1928

Rabies Prophylaxis. G. W. Stiles, Denver.—p. 131.
Tuberculosis Control in Colorado. J. J. Waring, Denver.—p. 135.
Human Tetanus in Colorado. I. C. Hall, Denver.—p. 141.
Extensive Cerebral Trauma with Recovery. P. Work, Denver.—p. 145.
Dry Heat Sterilization in Medical Practice. C. T. Burnett, Denver.—p. 147.
Urologic Factors in Reduction of Surgical Mortality. J. D. Barret, Billings, Mont.—p. 153.
Treatment of Gastric Ulcer. G. M. Russell, Billings, Mont.—p. 155.
Congenital Hypertrophic Pyloric Stenosis. A. E. Stripp, Billings, Mont.—p. 159.

## Georgia Medical Association Journal, Atlanta

**17:** 143-188 (April) 1928

Pigment Metabolism in New-Born. M. H. Roberts, Atlanta.—p. 143.
*Perforation of Rectum: Helpful Diagnostic Sign. C. H. Watt, Thomasville.—p. 150.
Lung Abscess: Two Cases. F. K. Boland, Atlanta.—p. 153.

**Rupture of Rectum.**—The symptoms to which Watt calls attention are pains beneath the costal margins, difficulty in breathing and pains in the back of the neck. These symptoms were noted very soon after the injury occurred. The boy sat on a brass curtain rod and sustained a tear of the anterior wall of the rectum, 1 cm. long, just behind the bladder, which was full of urine at the time.

## Iowa State M. Society Journal, Des Moines

**18:** 113-158 (April) 1928

How Deputy Councilor May Be of Service to County Society. C. S. Cornell, Knoxville.—p. 120.
Basic Science Law. S. T. Gray, Albia.—p. 124.
Id.: H. Albert, Des Moines.—p. 129.
County Medical Secretaries. M. C. Jones, Boone.—p. 129.
Changes in Social Scheme of Life: Problems Resulting Therefrom. A. D. McKinley, Des Moines.—p. 131.
Chest Clinics in Iowa. M. M. Myers and J. H. Peck, Des Moines.—p. 139.

## Johns Hopkins Hospital Bulletin, Baltimore

**42:** 245-317 (May) 1928

Changes in Conduction in Presence of Alternation of Heart. E. P. Carter and J. M. Faulkner, Baltimore.—p. 245.
Innervation of Skeletal Muscles: II. Of Muscle Spindles in Certain Muscles of Kitten. M. Hines and S. S. Tower, Baltimore.—p. 264.

## Journal of Comparative Psychology, Baltimore

**8:** 101-195 (April) 1928

Affective Characters of Major and Minor Modes in Music. C. P. Heinlein, Baltimore.—p. 101.
Form Discrimination in White Rat. P. E. Fields, Delaware, Ohio.—p. 143.
Studies in Activity: II. Activity Rhythms: Age and Activity: Activity After Rest. M. Shirley, Minneapolis.—p. 159.
Id.: IV. Relation of Activity to Maze Learning and to Brain Weight. M. Shirley, Minneapolis.—p. 187.

## Journal of Industrial Hygiene, Baltimore

**10:** 101-136 (April) 1928

Effects of Dust on Coal Trimmers. E. L. Collis and J. C. Gilchrist, Cardiff, Wales.—p. 101.

## Journal of Pharm. & Exper. Therapeutics, Baltimore

**32:** 413-517 (April) 1928

Effect of Morphine and Some Other Opium Alkaloids on Muscular Activity of Alimentary Canal: III. Action on Stomach in Unanesthetized Dogs. O. H. Plant and G. H. Miller, Iowa City.—p. 413.
*Id.: IV. Action of Morphine on Colon of Unanesthetized Dogs and Man. O. H. Plant and G. H. Miller, Iowa City.—p. 437.
Antagonism of Epinephrine by Ergotamine. R. Mendez, Edinburgh.—p. 451.
Studies on Experimental Shock: Treatment. M. I. Smith, Washington, D. C.—p. 465.

**Effect of Opium Alkaloids on Alimentary Canal.**—Plant and Miller summarize the results of their studies on the effects of the opium alkaloids on the muscular activities of the various portions of the alimentary canal in unanesthetized animals as follows: (*a*) In the stomach the effect is a marked fall in muscular tone and relaxation of the lower fundus and pyloric antrum, with disappearance of peristaltic activity. This occurred in both dog and cat. (*b*) In the small intestine (ileum) there is increase in muscular tone, and increase in the frequency and amplitude of the peristaltic waves. Changes of the same type were obtained in man. (*c*) In the colon the pronounced effect is a marked increase in tone, accompanied by more continuous peristaltic activity, although the rate and amplitude (depth) of peristaltic waves are not materially altered. The same effects were obtained in man. The application of these results to an explanation of the constipating action of opium seems to be as follows: Relaxation of the stomach wall and decrease in peristalsis of the pyloric antrum decreases the rate of discharge of gastric contents into the duodenum.

## Journal of Urology, Baltimore

**19:** 341-526 (April) 1928

Ureteral Stricture. V. Vermooten, W. H. Van Wart and E. P. J. Kearney, New Haven, Conn.—p. 341.
Partial Obstruction of Ureter. C. K. Smith and N. F. Ockerblad, Kansas City, Mo.—p. 347.
Benign Ureterospasm, Ureteral Stricture and Allied Syndromes. L. D. Keyser, Roanoke, Va.—p. 355.

V 9
192

Congenital Changes in Urinary Organs as They Influence Pyuria of Infancy and Childhood. H. O. Mertz, Indianapolis.—p. 371.
Thrombosis of Renal Artery with Total Occlusion. C. M. McKenna, Chicago.—p. 411.
Anomalous Renal Vessels: Four Cases. H. L. Sanford, Cleveland.—p. 421.
Jaundice Due to Movable Kidney. A. J. Scholl, Los Angeles.—p. 431.
Punctured Wound of Kidney. H. G. Hamer, Indianapolis.—p. 441.
Experimental Diverticula of Urinary Bladder. R. H. Herbst, H. J. Polkey and C. G. Weller, Chicago.—p. 445.
Operative Intervention for Relief of Diverticulum of Urinary Bladder: Fifty-Four Cases. O. S. Lowsley and R. Gutierrez, New York.—p. 459.
Normal Ureteral and Vesical Pressure. H. A. R. Kreutzmann, San Francisco.—p. 517.
Accurate Method of Estimating Pus and Blood Cells in Urine. N. F. Ockerblad, Kansas City, Mo.—p. 525.

## Kansas Medical Society Journal, Topeka

**28:** 143-176 (May) 1928

University of Kansas Medical School. H. R. Wahl, Kansas City.—p. 143.
Significance of Polyuria and Oliguria. C. R. Ferris, Kansas City, Mo.—p. 148.
Rabies. A. L. Skoog, Kansas City, Mo.—p. 151.
Treatment of Eczema in Infants. H. L. Dwyer, Kansas City, Mo.—p. 155.
Generalized Senile Pruritus. H. Schneiderman, Kansas City, Mo.—p. 158.
*Bacterial Food Infection. S. D. Henry, Kansas City.—p. 159.
Lumbar Puncture as Diagnostic Aid in Brain Abscess. O. J. Dixon, Kansas City, Mo.—p. 161.
Postoperative Comfort in Rectal Operations. F. B. Campbell, Kansas City, Mo.—p. 164.
Management of Pelvic Cases. R. R. Wilson, Kansas City, Mo.—p. 166.
Hernia of Lung. J. G. Montgomery, Kansas City, Mo.—p. 168.

**Bacterial Food Infection.**—*Bacillus proteus-vulgaris* was definitely established as being the cause of the etiologic outbreak of food infection in which 150 persons were affected. Henry urges that the term ptomaine poisoning should be discontinued and that all outbreaks of food infection should receive more careful laboratory investigation. The best treatment is immediate gastric lavage.

## Kentucky Medical Journal, Bowling Green

**26:** 177-222 (April) 1928

Acute Lymphatic Leukemia. W. E. Fallis, Louisville.—p. 180.
Recurrent Perineal Carcinoma. B. Asman and J. D. Hancock, Louisville.—p. 185.
Combined Radiation in Skin Cancer. H. C. Herrmann, Louisville.—p. 187.
Wryneck Following Burn: Relieved by Skin Flaps. O. R. Miller, Louisville.—p. 190.
Perianal Ulcerating Granuloma. W. E. Applehaus, Louisville.—p. 192.
Uterus Duplex, Bicornis, Cum Vagina Septa, Cesarean Section. T. K. Vanzandt, Louisville.—p. 195.
Tularemia: Case. E. T. Riley, Flemingsburg.—p. 197.
Thoracic Duct Rupture: Operation. E. D. Smith, Louisville.—p. 198.
Venereal Problem. E. R. Palmer, Louisville.—p. 201.
Pyloric Obstruction by Adenocarcinoma of Stomach. J. G. Sherrill, Louisville.—p. 211.

## Laryngoscope, St. Louis

**38:** 219-294 (April) 1928

Approach to Problem of Pain Fields, Especially Those Associated with Diseases of Nose and Throat. F. H. Pike, New York.—p. 219.
Five Mastoidectomies and Decompression Operation on Same Patient. P. S. Stout, Philadelphia.—p. 226.
Infective Lateral Sinus Phlebitis: Case with Recovery. V. K. Hart, Statesville, N. C.—p. 230.
Fibroma Arising from Jugular Bulb and Invading Midde Ear and External Auditory Canal. G. W. Mackenzie, Philadelphia.—p. 232.
Relation of Sinuses to General Economy. H. A. Schatz, Philadelphia.—p. 244.
Systemic Manifestations of Vincent's Infection. C. F. Tenney, New York.—p. 247.
Vincent's Infection of Mouth. R. A. Albray, Newark, N. J.—p. 250.
Operating on Nose Under General Anesthesia. S. B. Forbes, Tampa, Fla.—p. 264.
Neurosis Due to Too Much Operative Work on Nose. W. Freudenthal, New York.—p. 266.
Pericardial Esophageal Fistula Following Foreign Body in Esophagus: Pneumopericardium. C. J. Imperatori, New York.—p. 268.
Dysphonia Spastica (Spastic Hoarseness). L. Glushak, New York.—p. 273.
Suction Apparatus with Specimen Collector. L. Glushak, New York.—p. 278.
New Respiratory Shield. S. Jesberg, Los Angeles.—p. 280.

## Maine Medical Association Journal, Portland

**19:** 51-68 (April) 1928

Obscure Otolaryngologic Infections in Infancy. F. T. Hill, Waterville.—p. 51.

## Medical Journal and Record, New York

**127:** 465-520 (May 2) 1928

Place of Surgery in Malignancy. W. S. Bainbridge, New York.—p. 465.
Plan for Utilization of Unlimited, Unexploited, Experimental Material in Study of Human Cancer. A. L. Soresi, New York.—p. 471.
Radium Emanation Treatment of Cervical Cancer: VI. Technic. J. Muir, New York.—p. 472.
Acute Myeloid Leukemia Without Characteristic Blood Picture. S. Vaczi, Trenton, N. J.—p. 474.
Amnesia from Medicolegal Viewpoint. A. Gordon, Philadelphia.—p. 477.
Stomatologic Education in America. A. J. Asgis, New York.—p. 479.
Low Voltage Currents in Electrotherapy. N. E. Titus, New York.—p. 483.
Essential Phases in Treatment of Diabetes Mellitus. J. A. Buchanan, New York.—p. 485.
Experiences with Intarvin in Diabetes Mellitus. M. Einhorn and W. P. Braunstein, New York.—p. 488.
Where and Why Does Insulin Treatment Fail? G. Arany, Carlsbad, Germany.—p. 490.
Treatment of Severe Diabetes with Complications. A. Goldman, New York.—p. 495.
Glukhorment in Treatment of Diabetes Mellitus. B. Dubovsky, New York.—p. 497.
Gulliver and Medicine. W. R. Riddell, Toronto.—p. 501.

## Michigan State M. Society Journal, Grand Rapids

**27:** 185-244 (April) 1928

Cardiac Disease Complicated by Pregnancy. A. D. Kirk, Flint.—p. 185.
Recent Advances in Therapy of Tuberculosis. C. G. Fahndrich, Battle Creek.—p. 189.
Involutional Cyclic Conjunctivitis: Four Cases. E. O. Nielsen and J. M. Nielsen, Battle Creek.—p. 191.
Cancer Problem. W. A. Evans, Detroit.—p. 194.
Treatments for Syphilis Employed in Pontiac State Hospital. P. V. Wagley, Pontiac.—p. 195.
Id.: As It Pertains to Mental Cases. S. A. Butler, Pontiac.—p. 196.
Treatment of General Paralysis of Insane in Pontiac State Hospital. R. G. Janes, Pontiac.—p. 197.
Gynatresia: Two Cases. B. W. Malfroid, Flint.—p. 197.
Prevention of Hemorrhage from Tonsillectomy. H. T. Gray, Owosso.—p. 199.
Chronic Duodenal Ileus. J. E. Bellas, Marquette. p.—200.
Ocular Tuberculosis. E. E. Poos, Detroit.—p. 204.
Renal Tuberculosis. W. E. Keane, Detroit.—p. 208.
Pulmonary Tuberculosis. D. Donald, Detroit.—p. 212.
Radiographic Examination of Chest in Adults. J. C. Kenning, Detroit.—p. 212.
Tuberculosis Lesions. O. A. Brines, Detroit.—p. 213.
Surgery of Tuberculous Conditions. A. H. Whittaker, Detroit.—p. 214.
Skin Tuberculosis. G. Van Rhee, Detroit.—p. 215.

## New England Journal of Medicine, Boston

**198:** 539-604 (May 3) 1928

What Would You Do If You Had Peptic Ulcer? R. Fitz, Boston.—p. 539.
Duodenal Ulcer Without Symptoms: Four Cases. M. Golob, New York.—p. 546.
Gastrocolic Fistula as Result of Peptic Ulcer: Two Cases. R. T. Monroe and E. S. Emery, Jr., Boston.—p. 550.
Standards in Industrial Dermatology. C. G. Lane, Boston.—p. 553.
*Metastatic Hypernephroma of Jaw. C. F. Branch and R. H. Norton, Boston.—p. 559.
Papilloma of Ovary. E. B. Eastman, Portsmouth, N. H.—p. 562.
Some Aspects of Pancreatitis. J. P. Bowler and H. A. Des Brisay, Hanover, N. H.—p. 568.
Syphilis of Circulatory System: Aneurysm of Aorta. O. S. Wightman, New York.—p. 571.
Premature Separation of Placenta: Three Cases. R. O. Blood, Concord, N. H.—p. 572.
Blood Transfusion. H. H. Marks, Berlin, N. H.—p. 575.

**198:** 605-660 (May 10) 1928

Acute Pancreatitis: Six Cases. R. P. Watkins, Worcester, Mass.—p. 605.
Pancreatitis, Acute and Subacute: Postoperative Care. E. L. Hunt, Worcester, Mass.—p. 610.
Radical Pelvic Surgery. H. T. Hutchins, Boston.—p. 616.
Radiation and Electrothermy in Superficial Lesions. F. W. O'Brien, Boston.—p. 621.
Morbidity Survey of Shelburne-Buckland. H. L. Lombard and C. L. Scamman, Boston.—p. 625.
Epilepsy and Parkinsonism. P. I. Yakovlev, Palmer, Mass.—p. 629.
New Instrument for Cystoscopic Removal of Ureteral Calculi. S. N. Vose, Boston.—p. 638.
Two Rare Anatomic Fugitive Sheets. J. F. Ballard, Boston.—p. 639.

**Metastatic Hypernephroma of Jaw.**—Branch and Norton report a case of hypernephroma of the left kidney, which metastasized to the right kidney, liver, lungs and jaw. The clinical diagnosis had been carcinoma of the tongue. A dentist had made several attempts to close a discharging fistula on the lingual surface of the mandible opposite the inferior right second bicuspid tooth. The treatment had consisted of "pumping" a 5 per cent phenol solution (carbolic acid) through the root canal of the tooth, out through the fistulous opening. This

treatment had covered a period of about a year and a half and had not met with success. At this time the dentist had become alarmed about a growth that was developing in the vicinity of and including the fistula. On the lingual surface of the right side of the mandible and on the surface of the right sublingual gland there was noted a growth resembling an epulis. The involved area was removed by a radical operation, followed by the application of the actual cautery, apparently eliminating the growth and enabling the patient to masticate comfortably. At that time, a pathologist returned a report on the excised tumor classifying it as an epidermoid carcinoma. The growth reappeared in five months, and four platinum seeds of radium, amounting to 14.8 millicuries, were imbedded for ten days. At that time the patient had a severe fall, injuring the spine and left hip. Ten days later she appeared to be dazed and showed a left-sided hemiplegia and a rapid and irregular heart beat. The next day a bilateral paralysis was noted. The patient entered a state of coma and died on the third day.

## New Jersey M. Society Journal, Orange

**25:** 239-324 (April) 1928

Pulmonary Hemorrhage. B. S. Pollack, Secaucus.—p. 239.
Collapse Therapy in Pulmonary Tuberculosis. M. Frank, Egg Harbor. —p. 243.
Electrocardiographic Control of Active Digitalization in Auricular Fibrillation. A. E. Parsonnet, Newark.—p. 249.
Quinidine Therapy in Auricular Fibrillation. B. Saslow and J. H. Samuel, Newark.—p. 252.
Congestive Heart Failure and Response to Novasurol Therapy. A. G. Markel, Paterson.—p. 255.
Acute Abdomen. G. W. Lawrence, Lakewood.—p. 257.
Is Hospital Staff Keeping Pace with Rapidly Growing Hospital? C. L. Andrews, Atlantic City.—p. 261.
Study of Personality. G. K. Dickinson, Jersey City.—p. 264.
Tularemia: Case. R. A. Kilduffe and G. F. Daudois, Wildwood.—p. 267.

## New York State J. Medicine, New York

**28:** 423-480 (April 15) 1928

Cervical Adenitis: Surgical Consideration. R. F. Carter, New York.—p. 423.
Diabetes in Surgery. W. C. White, New York.—p. 428.
Doctor and Health Activities. L. R. Williams, New York.—p. 431.
Eye Injuries. L. L. Albert, Yonkers.—p. 432.

## Physical Therapeutics, Baltimore

**46:** 159-214 (April) 1928

Radiant Light in Gonorrheal Ophthalmia. J. J. P. Armstrong, Douglas, Ariz.—p. 159.
Obesity. A. Bassler, New York.—p. 164.
Year's Progress in Dietetics. J. W. Torbett, Marlin, Texas.—p. 170.
Physiologic Action of Heat. R. Burton-Opitz, New York.—p. 174.
Adjuvant Action of Diathermy in Nasal Accessory Sinus Disease. C. R. Brooke, Newark, N. J.—p. 183.

## Radiology, St. Paul

**10:** 275-364 (April) 1928

Standardization of Roentgen-Ray Dosage. H. Behnken and R. Jaeger, Berlin.—p. 275.
Epilation and Erythema Dose of Roentgen Ray. W. E. Chamberlain and R. R. Newell, San Francisco.—p. 280.
Standardization of Roentgen-Ray Dosage. O. Glasser, U. V. Portmann and V. B. Seitz, Cleveland.—p. 284.
Roentgen-Ray Dosage Measurement in Germany. H. Holthusen, Hamburg, Germany.—p. 292.
Investigations of Problem of Dosimetry in Roentgen-Ray Therapy. E. A. Pohle and J. M. Barnes, Ann Arbor, Mich.—p. 300.
Roentgenographic Examination of Base of Cranium in Presence of Basal Tumors. E. G. Mayer, Vienna.—p. 319.
Pancreatic Lithiasis: Case. G. H. Hess, Uniontown, Pa.—p. 342.

## Southwestern Medicine, Phoenix, Ariz.

**12:** 133-186 (April) 1928

Diabetes. F. M. Allen, New York.—p. 133.
Variation of Individual Cases of Artificial Pneumothorax. J. W. Laws, El Paso, Texas.—p. 136.
History of Medicine. O. H. Brown, Phoenix.—p. 144.
Poisonous Snakes: Treatment of Their Bites. A. Do Amaral, Glenolden, Pa.—p. 150.
Id.: Summary. M. L. Crimmins, Fort Sam Houston, Texas.—p. 157.
Middle Ear Disease in Infancy and Childhood. D. Fournier, Phoenix. —p. 158.
Prenatal Care: Relationship to Reduction of Fetal and Maternal Mortality. D. Fournier, Phoenix.—p. 159.
Anesthesia in Obstetrics. F. C. Jordan, Phoenix.—p. 160.
Bovine Tuberculosis. W. Branch, El Paso Texas.—p. 162.
Malaria in El Paso. P. R. Outlaw, El Paso, Texas.—p. 164.
Removal of Tack from Left Bronchus by Means of Bronchoscope. W. E. Vandevere, El Paso, Texas.—p. 166.

## FOREIGN

An asterisk (*) before a title indicates that the article is abstracted below. Single case reports and trials of new drugs are usually omitted.

## Archives of Disease in Childhood, London

**3:** 57-116 (April) 1928

Epidemic Encephalitis in Child: Eighty-Three Cases. M. M. Stevenson. —p. 57.
*Hepatic Efficiency: Value of Hemoclastic and Levulose Tests in Childhood. M. J. Brown.—p. 81.
*Normal Cerebrospinal Fluid in Children. D. Stewart.—p. 96.
*Transplantation of Ureters for Congenital Incontinence. G. A. Mason. —p. 109.
Analysis of Blood Groups of Children and Infants. E. V. Crowe.—p. 114.

**Value of Hemoclastic and Levulose Tests.**—The hemoclastic crisis test was performed by Brown in twenty normal and twenty-five abnormal conditions of childhood and was found to give inconsistent results. In the normal individual, variations in the sugar content of the blood after the ingestion of levulose range from a fall of 10 mg. to a rise of 28 mg. These variations could not be accounted for by the age of the child. A rise of more than 30 per cent in the blood sugar content after the administration of levulose is considered evidence of hepatic disease. The purity of the levulose is a most important element in the test. The levulose test was positive in the majority of examples of definite hepatic disease. The levulose test did not give any evidence that the liver is affected in ketosis or celiac disease. In some cases in which the clinical evidence leaves a doubt as to the diagnosis the levulose test may be of value, a positive curve, i. e., an increase in the blood sugar of more than 30 per cent with or without a prolonged curve, indicating definite and probably extensive derangement of the function of the liver.

**Normal Cerebrospinal Fluid in Children.**—Stewart examined the cerebrospinal fluid of fifty children varying in age from 1 year to 8 years. The pressure studies were of only negative value. They proved the uselessness of manometric readings in young children, in whom so many disturbing features may be present to upset the calculations. They showed also, the extreme inaccuracy of estimating the fluid tension by observation of the rate of flow. The cell count was found to be normally from 20 to 30 per cubic millimeter in infants, and to decrease gradually as the age increased, becoming identical with that of adults (from 3 to 7) at the age of from 10 to 12 years. The total protein content, estimated by the method of Denis and Ayer, was found to approximate in amount the content in adults. In the lumbar region it varied from 15 to 55 mg.; in the cisterna magna, from 12 to 50 mg., and in the lateral ventricles, from 5 to 18 mg. per hundred cubic centimeters. The sugar content of the fluid in children varies directly with the blood sugar. In order to be of most use to the clinician therefore, estimation of the fluid sugar should be accompanied by the estimation of the blood sugar. It was found that this relation of the spinal fluid sugar to the blood sugar in children is similar to that which exists in adults. The chloride content in children was found to vary normally from 630 to 760 mg. per hundred cubic centimeters, that is, a variation of 130 mg. The adult fluid has a fairly constant chloride content of from 720 to 750 mg. per hundred cubic centimeters, that is, a variation of only 30 mg.

**Successful Transplantation of Ureters.**—Mason relates the case of a boy who lived comfortably for three years after transplantation of both ureters into the sigmoid and who died after an operation done to relieve an acute obstruction of the small intestine due to a band in association with tuberculous mesenteric glands. A lateral anastomosis was performed. At the end of the operation there was a marked degree of collapse, but this was speedily overcome and for awhile all appeared to be going well. Unfortunately, after two days, a change for the worse was manifest and the condition rapidly retrogressed, death occurring on the fifth day. On the day after death a necropsy was made. The rectum was distended and its muscle definitely hypertrophied. The mucosa below the level of the ureteric orifices was the seat of a mild catarrhal inflammation. The right ureteric orifice was patulous; its mucosa had prolapsed, giving it a button-like appearance, and it was the seat of inflammatory change similar to that seen in the neighboring rectal mucosa. The left ureteric orifice was very difficult to

find and was represented by a mere slit through which a fine bristle had been passed, contrasting with its fellow which admitted with ease a glass rod of much greater magnitude. So difficult was the orifice to find that it had to be demonstrated by squirting fluid into the ureter above and searching for the issuing stream. The right kidney was markedly shrunken. On section the organ consisted mainly of the dilated pelvis and calices. The condition was an advanced pyonephrosis. The left kidney was of normal size. The cortex was swollen and the vascular markings stood out prominently. The pelvis and calices were slightly distended, the former merging imperceptibly with the ureter. Despite the apparently advanced degree of renal infection found post mortem, this child, until a few days before the end, not only appeared healthy but actually led the ordinary life of a school child without any inconvenience.

## British Medical Journal, London

**1:** 651-700 (April 21) 1928

Practical Applications of Recent Views on Menstrual Function. B. Whitehouse.—p. 651.
Ringworm: Treatment. J. M. H. MacLeod.—p. 656.
Hydrotherapy. R. G. Gordon.—p. 659.
*Ovarian Sarcoma in Child Associated with Sexual Precocity. A. H. Southam.—p. 661.
*Cause and Treatment of Crisis in Lobar Pneumonia. A. Cannon. —p. 661.
*Danger of Intravenous Calcium Therapy. W. D. M. Lloyd.—p. 662.
Congenital Mixed Tumor of Nasopharynx. J. E. G. McGibbon and J. M. Beattie.—p. 664.
*Treatment of Fractures of Clavicle with Displacement. G. W. Milroy. —p. 664.
Varicose Veins in Broad Ligaments. C. L. Granville-Chapman.—p. 665.
Hairpin in Bladder Causing Calculus Formation. J. McFadzean.—p. 665.
Dystocia Associated with Vaginal Band. W. W. Jeudwine.—p. 666.
Delayed Intracranial Hemorrhage. N. Duggan.—p. 666.
Scorbutic Swelling Simulating Acute Bursitis. R. L. Paterson.—p. 666.

**Ovarian Sarcoma with Sexual Precocity.**—Southam reports the case of a 3 year old girl who had a sarcoma of the right ovary and was sexually precocious. The tumor was subsequently removed and the patient has remained well, without apparent sign of recurrence, for two and a half years after operation.

**Cause and Treatment of Crisis in Lobar Pneumonia.**—Cannon points out that the penumonococcus produces oxygen and that an excess of oxygen is very detrimental to its growth, so much so that the cocci die. There is a limit to the utility of oxygen, for beyond a certain strength it defeats the object for which the organism apparently produced it. When this point is reached in pneumonia, the crisis is reached, and the temperature rapidly drops to normal or subnormal; in this way nature provides its own cure. When administering oxygen in pneumonia, it is of great importance that the oxygen should be used warmed. The oxygen should be heated by being passed though coiled Littré's tubes immersed in a water bath kept at a temperature of about 120 F.; the gas is passed through the tube at a slow rate, which is gaged by the comfort of the patient, who breathes quietly and does not complain of the "choking" feeling which occurs when the gas is administered too quickly. By keeping a thermometer in the tube it was found that the gas passing through at this very slow rate was about 99 F. when the water bath registered 120 F. One thing to watch is the risk of sudden collapse when the crisis occurs; this can fortunately be avoided by the daily administration of pituitary extract, 0.5 cc. being administered hypodermically morning and night and the heart action being safeguarded by digitalis administered from the onset of the disease.

**Danger of Intravenous Calcium Therapy.**—During the course of some experiments in the laboratory, electrocardiographic records were taken by Lloyd of the heart of man during and following the administration of 4 cc. of a 10 per cent solution of calcium chloride intravenously. It proved to be dangerous. The electrocardiogram showed a sino-auricular heart block.

**Treatment of Fracture of Clavicle.**—Milroy uses a modification of Sayre's method. Two 5-foot lengths of calico bandage are required. The first, as in Sayre's original method, is looped loosely round the affected arm as high up as possible, the loop being fastened with a safety-pin. The usual pad is placed in the axilla, the shoulder is pulled back as far as possible and the bandage is carried across the back of the trunk, round across the chest, and pinned to itself just beyond the loop round the arm. The second bandage, which should be at least 6 inches wide, is slit from one end for a little less than half its length, and is then applied to the injured arm in the form of a sling, with the two tails to the front, in the following manner: The uncut end of the bandage runs from the unaffected shoulder across the back to the elbow of the affected arm, which it supports, a pad of wool being placed between it and the olecranon. The bandage is adjusted in such a way that the two tails originate an inch or so in front of the point of the elbow. These tails are then carried round opposite sides of the forearm, and are twisted together once or twice as near to the bend of the elbow as is possible. They are then carried forward as spirals in opposite directions round the forearm, thus crossing on the dorsal aspect of the middle of the forearm, and also at the front of the wrist, where they are again twisted together and carried on as one to the shoulder. The elbow is then drawn upward, forward and inward to the required position, and secured by tying the ends of the "sling" over the unaffected shoulder.

## Journal of Hygiene, London

**27:** 225-341 (March) 1928

*Serologic Study of Hemolytic Streptococci Associated with Scarlatina. D. G. S. McLachlan and T. J. Mackie.—p. 225.
*Segregation Method for Eliminating Tuberculosis from Cattle. C. R. W. Adeane and J. F. Gaskell.—p. 248.
*Preberiberi Condition in Japan. E. C. Grey.—p. 257.
Nutrition of Birds. E. C. Grey.—p. 268.
*Coliform Organisms in Samples of "Certified Milk." C. H. Chambers. —p. 295.
Bacillus Anthracoides: Biologic Characters and Relationships: Pathogenic Properties Under Experimental Conditions. A. M. M. Grierson. —p. 306.
Relation Between Nature of Carbohydrate in Diet and Refection in Rats. S. K. Kon and E. Watchorn.—p. 321.
Pneumonia in Glasgow in Children Under Five. C. M. Smith.—p. 328.

**Serology of Hemolytic Streptococci in Scarlet Fever.**—McLachlan and Mackie state that while strains presenting particular serologic characters may be associated more frequently with scarlatina, hemolytic streptococci with common serologic characters occur both in scarlatina and in other conditions. No essential serologic distinction can be drawn between scarlatinal and other hemolytic streptococci and a *Streptococcus scarlatinae* group cannot be defined by serologic methods. Among the hemolytic streptococci derived from conditions other than scarlatina no relationship exists between serologic characteristics and toxigenic properties (as evidenced by cutaneous reactions to culture filtrates).

**Elimination of Tuberculosis Among Cattle.**—A method of segregation is described by Adeane and Gaskell by which any herd can be rendered tuberculin negative in from three to four years without diminution of the herd. Evidence is given that recovery from a tuberculous infection can take place in cattle.

**Preberiberi in Japan.**—A preberiberi condition is described by Grey, and is considered to be very prevalent in Japan. The preberiberi condition arises from a prolonged use of a diet deficient in essential factors, as well as accessory factors, and in particular from one too low in protein and too high in starch, though there is sufficient vitamin B complex to prevent, under ordinary circumstances, the appearance of beriberi. It is therefore a condition to which the rice-eating peoples are liable whether the rice is polished or not. When the preberibri condition is present, beriberi may appear as the result of many causes without any diminution in the quality of the diet—for example, as the sequel to fatigue, heat, or intoxication—and it is conceivable that a too sudden improvement in the quality of the diet might even act harmfully in stimulating the body too quickly to activity. Prophylactic treatment is by far the most important since the condition is slowly acquired, and difficult to cure. Milk, eggs and meat are especially recommended, and natural instead of artificial foods.

**Coliform Organisms in Certified Milk.**—From thirty-two samples of certified milk examined by Chambers, 268 coliform organisms were isolated; 65.7 per cent fall within the true *B. coli* group and 18.6 per cent in groups X and Y of Stewart. Fifty-four and one-tenth per cent of the organisms can be assumed to be of fecal origin; 45.9 per cent are of the type generally found in soil and water. All of the thirty-two samples

examined contained coliform organisms in a dilution of 1 to 10. None of these samples, however, gave a positive reaction with the presumptive test in two out of three tubes of 0.1 cc. dilution. The presumptive test cannot therefore be relied on to give a true indication of the presence of coliform organisms in milk.

## Bruxelles-Médical, Brussels

**8:** 825-854 (April 22) 1928

Value of Vernes' Flocculation Test in Tuberculosis. L. Langeron and H. D'Hour.—p. 825.
Pathogenesis of Flint's Murmur. F. van Dooren and M. Wybauw.—p. 828.
*Bilateral Tubal Pregnancy. R. Schockaert.—p. 833.

**Case of Bilateral Tubal Pregnancy.**—While operating for a ruptured left tubal pregnancy Schockaert saw a right tubal pregnancy rupture. Since the latter rupture did not bleed, due to the marked anemia of the patient, he first removed the right ovary and what remained of the ruptured right tube, together with the 2 cm. long fetus that had escaped from it, and then resected the ruptured right tube.

## Lyon Médical, Lyons

**141:** 429-456 (April 15) 1928

*Chronic Mitral Endocarditis. A. Dumas, R. Froment and M. Mercier.—p. 429.

**Anatomic and Clinical Aspects of Chronic Mitral Endocarditis.**—After studying forty cases of chronic mitral endocarditis, Dumas et al. conclude that: (1) lesions of chronic endocarditis involving the mitral valve without having given rise to asystolic accidents may be met with even in old people; (2) there is frequently no history of a previous attack of rheumatism; (3) most cases of chronic mitral endocarditis do not give rise to asystolic accidents and in the great majority of cases cardiac hypertrophy is absent.

## Paris Médical

**67:** 329-344 (April 14) 1928

Technic, Results and Interpretation of Hemocultures. C. Zoeller.—p. 329.
*Theories of Urinary Secretion. P. Chevallier.—p. 338.

**New Theory of Urinary Secretion.**—To the three existing theories of urinary secretion, Chevallier adds a fourth. According to him the tubules eliminate everything: water, salts, urea and related substances. The glomerulus eliminates nothing; it is an organ of absorption.

## Presse Médicale, Paris

**36:** 497-512 (April 21) 1928

*Popliteal Aneurysms Complicated by Gangrene. D. Petit-Dutaillis and D. Théodoresco.—p. 497.
Action of Mineral Waters on Growth and Vitality of Cells. A. Mougeot and V. Aubertot.—p. 500.
Accidents Following Spinal Anesthesia. M. Arnaud and A. Crémieux.—p. 502.

**Treatment of Gangrene Due to Popliteal Aneurysm.**—According to Petit-Dutaillis and Théodoresco the treatment of gangrene due to popliteal aneurysm depends on which one of the three possible mechanisms is involved: (1) When the gangrene is caused by arterial thrombosis following rupture of the aneurysmal sac, it extends upward very early, at times as far as the knee. This type is extremely rare and always requires amputation at the hip. (2) When the gangrene is caused by embolism from a popliteal aneurysm, conservative treatment is always to be recommended. Provided that the gangrene is dry and has no tendency to rapid extension, its treatment is of less importance than early treatment of the aneurysm itself. The only possible procedure here is resection of the sac. This frequently results in a peripheral vasodilatation which has a favorable action in arresting the gangrene. Amputation of the foot is performed ultimately. (3) When the gangrene follows rupture of the aneurysmal sac into the tissues, the natural tendency is to amputate at the hip. The authors are of the opinion, however, that in many of these cases extirpation of the aneurysm combined with evacuation of the hematoma would permit the limitation if not the retrogression of the gangrene. If one is in doubt as to the condition of the tissues, an exploratory incision should be made in the popliteal fossa. If one or more of the calf muscles shows signs of gangrene, amputation at the hip should be performed at once. If no evidence of gangrene is present, conservative treatment is indicated.

## Revue de Médecine, Paris

**44:** 1143-1269, 1927

*Subcutaneous Injection of Oils. L. Binet and H. Binet.—p. 1143.
*Hypertension in Pulmonary Circulation. C. Truneček.—p. 1163.

**Fate of Oil Injected into the Subcutaneous Tissue.**—In experiments performed on guinea-pigs, rabbits and dogs, Binet and Binet found that: (1) several months are required for the absorption of oils injected under the skin; (2) this absorption is slower with animal oils than with vegetable oils; (3) the absorption takes place following a very marked histologic reaction: most frequently one notes an encapsulation of the drops of oil and, in the walls of the capsules, one sees mononuclear cells, which seem to play an active rôle; (4) this histologic reaction is accompanied by chemical changes in the oil, which undergoes a local digestion with liberation of fatty acid; (5) the absorption of substances added to the oil depends on the substances themselves: (*a*) the oil may be absorbed completely whereas the substance added may remain in situ, even if it were originally dissolved in the oil (sudan); (*b*) the substance dissolved may be absorbed after a few hours (camphor) or after a few days (iodoform) whereas a long time is required for the absorption of the oil; (*c*) a substance combined with oil (iodine) is liberated only as the oil is attacked; (*d*) no substance capable of combining with the fatty acid formed during the absorption of the oil should be injected with the oil, because nonabsorbable soaps may result.

**White and Red Types of Hypertension in Pulmonary Circulation.**—According to Truneček, hypertension is always due either to diminution of the vascular cavity or to augmentation of the mass of blood. In the systemic circulation, the diminution is produced by constriction of the superficial arteries, which renders the skin anemic (white hypertension); in the pulmonary circulation, muscle fibers being absent in the pulmonary arteries, white hypertension can only result from an obliteration of the capillaries. Red hypertension, on the contrary, is caused in both circulations by an augmentation of blood. The white idiopathic variety can result from a spasm of the respiratory mucosa and it is then only transient. In emphysema where obliteration of the capillaries is accompanied by atrophy of lung tissue, it is permanent. The red idiopathic variety occurs in plethora, symptomatic in defects of the orifices of pulmonary veins, and finally in asystole of the left myocardium, or it is due to a reflux of blood into the left auricle. The signs common to the two types of hypertension are: metallic diastolic murmur over the pulmonary artery, dilatation of the pulmonary artery and hypertrophy of the right myocardium. The distinction between the two varieties is based on the fact that in white hypertension the pulmonary veins carry only a small volume of blood to the left auricle, which diminishes in size, whereas in red hypertension they are engorged with blood and the left auricle enlarges.

## Schweizerische medizinische Wochenschrift, Basel

**58:** 353-376 (April 7) 1928

Blood Group Distribution in Schizophrenia. P. Würz.—p. 353.
*Course and Prognosis of Tuberculosis of the Spine. O. Businger.—p. 355.
Treatment of Neuritis. E. J. Meier.—p. 362.

**Course and Prognosis of Tuberculosis of the Spine.**—Businger analyzes 108 cases of tuberculous spondylitis occurring in soldiers in the third decade of life. In the total of all diseases in the military force reported on, the percentage of tuberculous spondylitis was 1.08. In 14.8 per cent of these cases there was an hereditary tuberculous taint. Tuberculosis was present in the past history of the patient in 31.5 per cent. Trauma was an etiologic factor in only 6.5 per cent. The prognosis of traumatic tuberculous spondylitis is particularly bad; the mortality was 57.1 per cent. He warns against making the diagnosis lumbago, sciatica or rheumatism without careful examination of the spine, since spondylitis begins with similar symptoms. The average mortality was 24.1 per cent, which he believes would be increased by later examinations. In the fatal cases, the average duration of the disease was four and one-third years; in the cases that ended in healing, four and one-half years. The second lumbar was the vertebra most frequently attacked;

the prognosis is worst in disease of the cervical spine and best in that of the thoracic spine. A perceptible gibbus was present in half of the patients. Abscesses were observed in 62.9 per cent of cases. All abscesses affect the prognosis badly, particularly those with fistulas and mixed infection, which gave a mortality of 60.8 per cent. Slight spinal cord symptoms were frequent and not dangerous; more severe symptoms, which were present in 11.1 per cent of cases, were accompanied by a high mortality (66.6 per cent). In 56.6 per cent, tuberculosis of other organs was present. In the cases thus complicated, the mortality was 36 per cent. In a little less than half of these, the spondylitis was the direct cause of death. In 18.5 per cent of cases the disease recurred. The spondylitis left permanent sequelae in 63.1 per cent of the cured cases.

## Archivio Italiano di Chirurgia, Bologna

**20:** 607-720 (March) 1928

Surgical Treatment of Elephantiasis. C. Romiti.—p. 607.
Isolated Mediotransverse Fractures of the Carpal Scaphoid. A. Magliulo. —p. 641.
Surgery of the Labio-Maxillo-Palatine Fissure. F. Lasagna.—p. 661.
Pancreatic Function in Patients with Peptic Ulcer. G. Galli, R. Pecco and E. Polacco.—p. 680.
*Origin of Gastric Ulcer. A. Ciminata.—p. 711.

**Origin of Gastric Ulcer.**—Ciminata contends that the fact that he did not find the peptic ulcer in the zone affected by the mechanical stimulus that he applied to the stomach in his experiments on dogs, but in an area far removed from such stimulus, is evidence that the genesis of peptic ulcer is not due, as has been asserted, to mechanical action, but to other causes.

## Gazzetta degli Ospedali e delle Cliniche, Milan

**49:** 285-320 (March 11) 1928

Treatment of Syndromes of Helminths and Protozoa. F. Fumarola. —p. 287.
*Huge Hydatid Cyst. E. Barnett.—p. 291.

**Huge Hydatid Cyst.**—Barnett's patient, a man aged 39, weighed 107 Kg. The girth of the abdomen was 1.44 meters. On palpation, the vibratory fluctuation common to ascites was noted. The true fremitus characteristic of a hydatid cyst could not be elicited. Diagnosing ascites, the author introduced a small trocar. Fluid was not obtained. Then he introduced a trocar 1 mm. in diameter, with a syringe for aspiration. No fluid was secured, but in the exploring needle was a fragment of gelatinous substance, which pointed to a hydatid cyst. A hollow needle 2 mm. in diameter was inserted and this time he obtained some membranous laminae, which confirmed the diagnoses of hydatid cyst. The Casoni cutaneous test proved negative. The deviation of complement test was frankly positive. At operation, fifty liters of fluid were evacuated together with a large number of daughter cysts varying in size from a cherry to an ostrich egg. A large cushion was carefully introduced into the enormous cavity. The patient's weight fell to 56 Kg. or less than half his original weight. Two months and a half after the operation, he weighed 76 Kg., looked well, felt strong, and soon resumed his active life, which required much horseback riding.

## Pediatria, Naples

**36:** 281-338 (March 15) 1928

Filtrability of Tubercle Bacillus. M. Gerbasi.—p. 297.
*Desensitization of the Tuberculous. R. Pastore.—p. 305.
Cerebrospinal Meningitis Caused by Weichselbaum Meningococcus in Palermo, 1918-1927. B. Vasile.—p. 317.
*Primary Diphtheria of Umbilicus. M. Prebil.—p. 332.

**Desensitization of Tuberculous Patients.** — Pastore reports her attempts to desensitize children giving a positive Pirquet reaction. It is possible to desensitize patients whose tuberculous lesions are not very serious and have not affected materially the general condition, but the results do not appear to be permanent. It is impossible to desensitize the patients with advanced tuberculosis.

**Primary Diphtheria of the Umbilicus.**—Prebil's patient was an infant 20 days old. Owing to the absence of special differential symptoms and the frequently mild course, such cases may easily pass unobserved.

## Policlinico, Rome

**35:** 487-538 (March 19) 1928. Practical Section

Recent Modifications of Wassermann Test. G. C. Rocca.—p. 487.
*Acute Appendicitis from Ascarides. E. Garrone.—p. 493.
*Heredity of Malignant Tumors. M. Bioglio.—p. 496.

**Acute Appendicitis from Ascarides.**—Garrone demonstrated that ascarides may be present in appendicitis and may be the cause of the condition. Such an event is, however, exceedingly rare. The association of helminthagogic treatment with other interventions may be advisable in some cases.

**Heredity of Malignant Tumors.**—Bioglio gives the condensed histories of a number of families, in which the repeated occurrence of malignant tumors suggests that hereditary influences may play a part in their development.

## Riforma Medica, Naples

**44:** 273-305 (March 12) 1928

*Tuberculin Therapy in Lupus Erythematosus. A. Oro.—p. 275.
*Erythrocyte Sedimentation Test in Diagnosis of Malignant Tumors. G. Macchioro.—p. 287.

**Tuberculin Therapy in Lupus Erythematosus.**—Oro reports fifty-one cases, with 33 per cent of cures, 13.7 per cent of approximate cures, 11.7 per cent of great improvement, 7.84 per cent of considerable improvement, 7.84 per cent of slight improvement, and 25.46 per cent of failures. The author emphasizes that the greatest prudence must be exercised in the use of so active a substance as tuberculin.

**Erythrocyte Sedimentation Test in Diagnosis of Malignant Tumors.**—Macchioro applied the erythrocyte sedimentation test to 102 patients, fifty-two of whom had malignant tumors. The Linzemeier method was followed. Great care was taken to exclude concomitant tuberculosis, fever or other factors that might modify or alter the value of the results obtained. Of the fifty-two cases, eighteen, or 34.6 per cent, came under the first group (sedimentation up to two hours); nineteen, or 36.5 per cent, under the second group (sedimentation up to one and one half hours), and ten, or 19.2 per cent, under the third group (sedimentation up to thirty minutes). In five cases, or 9.6 per cent, the sedimentation speed was within normal limits. From the results obtained, it may be concluded that the erythrocyte sedimentation test is far from being of real value in the diagnosis of malignant tumors. The value of the test is considerably increased if the result lies within normal limits. In that case, exclusion of a malignant tumor rests on a high degree of probability. The method thus becomes of definite supplementary value.

## Archivos de Medicina, Cirugía y Espec., Madrid

**28:** 365-404 (March 17) 1928. Partial Index

*Blood Grouping. J. A. Urra.—p. 365.

**Blood Grouping.**—Urra states that on the basis of their isoagglutinins and isoagglutinogens all men can be divided into four blood groups: Agglutinins begin to develop immediately after birth. Agglutinogens exist from the first months of intrauterine life. There is a relation between the blood groups of uniovular and of biovular twins. There is also a relation between the blood groups and the Wassermann test.

## Folha Médica, Rio de Janeiro

**9:** 65-76 (Feb. 25) 1928. Partial Index

*Mortality from Syphilis. L. F. Torres.—p. 70.

**Syphilis Mortality.**—Among 413 children up to 4 years of age, the mortality from syphilis was 2.5 per thousand; it was 0.05 per thousand from 5 to 14 years of age; 0.19 per thousand in patients between 15 and 49 years; 0.09 per thousand in patients 50 years of age or older. In the first two age groups, the mortality is much greater in boys than in girls.

## Archiv für Kinderheilkunde, Stuttgart

**83:** 241-320 (March 23) 1928

*Open Air Treatment of Pneumonia in Infants. A. Lewin.—p. 241.
Acute Transverse Myelitis as Form of Acute Anterior Poliomyelitis. C. Hünermann.—p. 251.
Has Influenza Any Influence in Spread of Other Infectious Diseases? Z. von Barabás.—p. 256.
Sequelae of Encephalitic Parkinsonism. J. S. Galant.—p. 265.
Effect of Ultraviolet Rays on Leukocytes in Children. F. Ilhan.—p. 270.

Mediastinal Pleuritis in Children. P. Reyher.—p. 276.
True or Complete Cyclopia. A. Schepetynskaja.—p. 286.
Care of the New-Born in Lying-In Division. E. Thomas.—p. 289.
Case of Arachnodactylia. F. Bier.—p. 292.

**Open Air Treatment of Pneumonia in Infants.**—Lewin recommends the open air treatment of pneumonia in children as being superior to other methods of treatment, except in cases of septic pneumonia. It has a decided narcotic effect, improves the circulation, eases respiration and ameliorates the cyanosis. The effect on the vegetative nervous system is the outstanding result of the treatment. When this is not able to react, as in the cardiac, atonic, septic and alimentary types, the treatment is without avail.

## Beiträge zur Klinik der Tuberkulose, Berlin

**68:** 485-670 (Feb. 27) 1928

Clinical History of Disseminated Tuberculosis. F. Seligsohn.—p. 485.
Lymph System of Lungs: Topography of Bronchial Lymph Nodes. R. Steinert.—p. 497.
*Functional Disturbances of Stomach in Pulmonary Tuberculosis. F. Jäggi.—p. 511.
*Blood Picture in Course of Pneumothorax for Pulmonary Tuberculosis. R. Russew.—p. 522.
*Matéfy's Reaction in Pulmonary Tuberculosis. S. Erlandsson and K. Åkerberg.—p. 527.
Leukocyte Picture in Various Forms of Tuberculosis. R. Russew. —p. 539.
Practical Experiences with Lehman-Facius and Loeschcke Test for Precipitating Antibodies in Active Tuberculosis. R. Steinert.—p. 545.
Experiences with Neuberg-Klopstock's Tuberculosis Antigen. K. Siegfried.—p. 558.
Chemotherapy of Tuberculosis (Sanocrysin). L. Wohlberg.—p. 565.
Animal Experiments with Sanocrysin. L. Lange.—p. 585.
Gold Therapy of Pulmonary Tuberculosis. A. Freund.—p. 606.
Preventive Measures Against Tuberculosis. K. H. Blümel.—p. 634.
*Tuberculous Arthritis: Erythema Nodosum. S. Magnússon.—p. 657.
*Differential Diagnosis of Lung Tumor and Pulmonary Tuberculosis. E. Schwalm.—p. 667.

**Functional Disturbances of the Stomach in Pulmonary Tuberculosis.**—Jäggi examined the gastric secretion of 100 cases of pulmonary tuberculosis. The acidity was often reduced, oftener in severe cases than in mild cases. Hyperacidity was never present in the latter group. In the severe cases the acidity was reduced, but not the amount of the secretion. The pepsin concentration is reduced in all cases, but the pepsin reduction does not run parallel with the acidity reduction. Gastric motility was lessened in one third of the cases, but never in cases with hypersecretion. High grade motor and secretory insufficiency was noted in rapidly progressing cases. Almost without exception, tubercle bacilli were found in the fasting stomach, sometimes even when patients denied having any expectoration.

**Blood Picture in Course of Pneumothorax for Pulmonary Tuberculosis.**—Russew finds that the blood picture is of some significance in the conduct of a pneumothorax. If soon after the filling is begun, polynucleosis diminishes and shifting of the Arneth count to the left occurs less often, together with an increase in the lymphocytes and the appearance of eosinophils, all is well and the filling process may proceed. If these changes do not take place, the progonisis is bad—the filling should be stopped and other treatment instituted.

**Matéfy's Reaction in Pulmonary Tuberculosis.**—Although Erlandsson and Åkerberg did not find the Matéfy reaction as distinctive as its discoverer has found it, it does, in their opinion, furnish a clue to the intensity of the process; hence, is of some prognostic value. It checks well with the sedimentation reaction. They relate their experience with the Matéfy reaction in 355 cases.

**Tuberculous Arthritis: Erythema Nodosum.**—Magnússon has observed cases of exudative and anklotic polyarthritis, arthralgia and erythema nodosum in tuberculous patients. He does not believe that all these cases were of tuberculous origin —but many of them were. Some were clearly of rheumatic origin. Among 1,500 patients with pulmonary tuberculosis, erythema nodosum occurred eleven times. Two of these cases were mild cases of tuberculosis—without bacilli; two were advanced cases—without fever, but with bacilli. In the mild cases, the appearance of the erythema was accompanied by a high fever; in the two advanced cases, there was no fever. Four patients did not have any joint pains; five had some joint pains, of short duration, and two had very severe joint pains. As to treatment, heliotherapy and sun baths proved most effective. Sodium iodide, 1 Gm., two or three times daily, apparently enhanced the effect of the light treatment; salicylates were utterly useless. Sanocrysin, on the other hand, yielded very satisfactory and lasting results.

**Differential Diagnosis of Lung Tumor and Pulmonary Tuberculosis.**—As a means of differentiation between lung tumor and pulmonary tuberculosis, Schwalm recommends creating a pneumothorax and then making a careful roentgen-ray examination of the chest.

## Deutsches Archiv für klinische Medizin, Leipzig

**159:** 1-128 (March) 1928

*Virilism (Masculinity) in a Case of Adenoma of the Suprarenal Cortex. M. Winkel.—p. 1.
*Differential Diagnosis of Lymphatic Reaction in Angina. H. Lenhartz.—p. 13.
*Chemical Composition of the Kidney in Disease and Its Relation to Anatomical and Clinical Forms. G. Hoppe-Seyler.—p. 31.
Murmurs Recognized by Palpation of Thoracic Wall in Suppurations in Thoracic Cavity. W. Stepp and R. Cobet.—p. 60.
*Circulatory Failure in Diabetic Coma. S. Lauter and H. Baumann.—p. 65.
Ion Content of the Blood in Patients with Cardiac Disease. W. Burger. —p. 79.
Pathogenesis of Pernicious Anemia. P. Morawitz.—p. 85.
*Results with Liver Diet in Pernicious Anemia. C. Seyfarth.—p. 93.

**Virilism (Masculinity) in a Case of Adenoma of the Suprarenal Cortex.**—The author describes a case of virilism of suprarenal origin developing in the course of eleven years in a woman, 36 years old. The accompanying hypertonia, glycosuria, polycythemia and relative increase in neutrophil leukocytes pointed at the same time to hyperfunction of the medullary portion of the suprarenal gland. The blood sugar remained within normal limits. The constancy of the blood sugar level after injection of insulin suggested increased production of epinephrine. The presence of a tumor of the right suprarenal gland was established by palpation and by the roentgenogram. At operation a tumor of the suprarenal cortex was removed, which proved to be an adenoma. The patient died two days later. Necropsy established atrophy of both suprarenal glands, of the thyroid and of both ovaries. The pancreas and the pituitary were normal.

**Lymphatic Reaction in Angina; Its Differential Diagnosis.**—The author describes two cases of lymphatic angina with a pronounced general disturbance accompanied by a swelling of cervical, occipital and axillary glands, enlargement of the spleen, a peculiar condition of the pharynx, and a change in the blood picture. In one case the blood picture was normal three weeks before the onset of the acute illness. The relative and absolute increase in lymphocytes amounted to 18,000, or 90 per cent. There were 3 per cent of mononuclears, leaving 7 per cent of cells belonging to the myeloid system; therefore, apparently this was a case of agranulocytosis. While different both clinically and hematologically from the symptom complex which Schultz named "agranulocytosis," the author thinks that the difference may be one of degree only. The differential diagnosis from acute lymphatic leukemia is very difficult, particularly in the first few days. The etiology of the lymphocytic reaction, of agranulocytosis, monocytic angina, and acute lymphatic leukemia has not been determined. It is supposed to be infection. The author investigated the blood picture in 160 cases of sepsis without once observing a high grade lymphocytosis with eventual extreme leukopenia. He thinks that "lymphatic angina," "monocytic angina," and "agranulocytosis" are etiologically related, and differ from each other in degree only.

**Chemical Composition of the Kidney in Disease and Its Relation to Anatomic and Clinical Forms.**—Hoppe-Seyler found that under normal conditions the kidney, without its fatty capsule, the pelvis and the large vessels, weighed from 220 to 256 Gm. The water content amounted to 81 per cent, the dry weight to 19 per cent. Coagulable albumin amounted to 13.9 per cent, the total nitrogen weighed 5.8 Gm., fat 2 per cent, and ash, 0.8 per cent of the total weight. In simple chronic congestion of the kidney, there was noted a slight increase in the general weight, the dry weight and the water content, with a decrease in albumin and fat, the latter due

V 90
1928

to pressure atrophy caused by dilated vessels. In the ordinary cloudy swelling, there were noted regularly an increase in coagulable albumin and in total nitrogen. In fatty degeneration of the kidney, there is an increase in the fat content and a decrease in coagulable albumin and in total nitrogen. Amyloid contracted kidneys showed diminished fats, pronounced proliferation of connective tissue and a diminution of the albumin content. This corresponds to the clinical picture of renal insufficiency. In glomerulonephritis, he has noted a diminution of coagulable albumen and of combined nitrogen. In nephritis, fatty degeneration of cells runs parallel with parenchyma destruction. Apparently the fat formation within the cell takes place at the expense of its albumin content. The most pronounced loss of coagulable albumin and of total nitrogen was seen in cases of secondary contracted kidneys. These cases are characterized clinically by renal insufficiency, high blood pressure and uremia. Contracted kidneys of arteriosclerotic or syphilitic origin showed diminished general weight as well as dry weight. The loss of coagulable albumin and total nitrogen was particularly marked in the cases of red granular atrophy. The diminution in albumin means a loss of secreting parenchyma.

**Circulatory Failure in Diabetic Coma.**—The authors made a series of determinations of the minute volume of the blood in three cases of diabetic coma. They demonstrated a marked fall in volume with the onset of coma. In spite of a definite insulin effect, this circulatory insufficiency continued. The change was not observed in cases of grave acidosis unaccompanied by signs of coma.

**Results with Liver Diet in Pernicious Anemia.**—Seyfarth studied the effect of liver diet in twenty-nine patients with pernicious anemia. A rapid and lasting remission took place in each case. The results were further improved by irradiation of patients with ultraviolet rays. He regularly observed the appearance in the peripheral blood of reticulocytes and eosinophils. Colon bacilli were found with greater frequency in the urine of these patients. Patients undergoing a liver diet treatment should be watched for bacilluria.

## Klinische Wochenschrift, Berlin

**7:** 673-720 (April 8) 1928. Partial Index

Treatment of Skin Lesions with Cathode Rays. Baensch and R. Finsterbusch.—p. 681.
*Innervation of Sweat Glands and Surgical Treatment of Hyperhidrosis. W. Braeucker.—p. 683.
Case of Tuberculous Arthritis. H. Kubierschky.—p. 686.
*Injection Treatment of Varicose Veins. E. Ruhemann.—p. 689.
Seyderhelm's Method of Examination of Urinary Sediment in Urologic Surgical Disease. G. Kemény.—p. 694.
Causes and Prevention of Meningism After Lumbar Puncture. E. Trautmann.—p. 695.
Electric Resistance Thermometer for Continuous Control of Rectal Temperature. W. Bauch.—p. 699.

**Innervation of Sweat Glands and Surgical Treatment of Hyperhidrosis.**—Braeucker reports a case of excessive sweating of the hands and feet, in which dryness of the left hand was obtained by division of the rami communicantes of the eighth cervical and first thoracic nerves on the left side, and dryness of the feet by division of the rami communicantes of the fourth and fifth lumbar and first and second sacral nerves on both sides. The success of the first operation has lasted already for one year, that of the second operation for nine months. An attempt to cure the hyperhidrosis of the right hand was not made. The treated regions remained dry after application of thermal and psychic stimuli sufficient to make the normal skin areas sweat profusely. Administration of pilocarpine, on the contrary, caused sweat to be secreted in the treated areas ten months after the interruption of all connection with the sympathetic system. Braeucker does not take the standpoint that the drug acts directly on the secreting cell, i. e., that the sweat glands are able to function independently of the nervous system. He believes, rather, in an autonomic, local nervous mechanism, on the basis of the nerve cells with a system of connecting processes, demonstrated by Kreibick in the meshes of the cutaneous nervous network.

**Injection Treatment of Varicose Veins.**—Ruhemann saw better results from injection of 20 per cent solutions of sodium chloride than from injection of hypertonic sugar solutions. As a preventive of the thrombosis extending further than desired in the central direction, he compresses the veins with pledgets centrally to the site of injection and applies strips of plaster circularly. Surgery is distinctly preferable in high varices of the thigh and in knots of varicose veins, on the thigh or on the leg, which anastomose with the deep veins, since these varices can never be made completely empty of blood and the danger of embolism is greater in the presence of these anastomoses.

## Medizinische Welt, Berlin

**2:** 549-596 (April 14) 1928. Partial Index

Serodiagnosis of Tuberculosis. C. Neuberg and F. Klopstock.—p. 549.
Minimal and Optimal Amounts of Protein in Daily Diet. A. Bickel.—p. 551.
Physiology of Work. G. Lehmann.—p. 552.
*Carcinoma Diagnosis from the Blood with Ringold's Procedure. F. Roulet.—p. 555.
Late Syphilitic Leukoplakia of Uterus and Carcinoma. K. Heymann.—p. 556.
Arthritis Deformans. F. J. Lang.—p. 557.
Gastric Lavage Since Kussmaul. I. Boas.—p. 559.
Wrong Diagnoses of Late Congenital Syphilis. H. von Mettenheim.—p. 561.
Origin, Treatment and Prevention of Electrical Injuries. C. Prausnitz.—p. 565.
Insulin Treatment of Parenchymatous Hepatic Injuries. F. Umber.—p. 567.

**Carcinoma Diagnosis from the Blood with Ringold's Procedure.**—Using Ringold's method, Roulet found monocytes with double nuclei in 61 per cent of sixty-eight cases of cancer. In most of the positive cases, they were, however, extremely rare. In eight blood pictures of healthy persons and forty-seven of patients with various diseases, he found monocytes with double nuclei in 42 per cent (only one of the healthy persons gave a positive blood picture). This method is therefore unsuited for the diagnosis of cancer. The monocytes with double nuclei are, he avers, aging cells. He believes that Ringold's method may prove valuable in hematology for demonstrating fine points of nuclear structure.

## Münchener medizinische Wochenschrift, Munich

**75:** 593-632 (April 6) 1928. Partial Index

*False Renal Colics. S. Kartal.—p. 601.
Dosage of Bucky's Infraroentgen Rays. H. Kirsch.—p. 603.
*Shoulder Pains. A. von Liebermann.—p. 605.
Increasing Capacity for Physical Exercise by Ultraviolet Irradiation. F. Lickint.—p. 605.
*Two Unusual Cases of Sport Injury. H. Hillebrand.—p. 607.
Case of Suture of Common Carotid Artery. H. Kuntzen.—p. 607.
Surgical Treatment of Habitual Shoulder Dislocation. R. Pürckhauer.—p. 608.
Indispensability of Cocaine in Rhinology. F. Bruck.—p. 609.

**False Renal Colics.**—Kartal holds that, in every case of spermatocystitis, the question of injury to the kidney of the affected side should be looked into. If such injury exists, conservative treatment should first be tried, to see whether improvement in the local process brings about improvement in renal function. If conservative treatment fails, the treatment of choice is removal of the seminal vesicle. Five cases are reported. In three, the colicky pains had led to the diagnosis of appendicitis. In three, also, the renal function was disturbed. Sympathetic involvement of the ureter depends on the shape of the individual seminal vesicle rather than on its size. Involvement of the bladder wall depends on the site of the severest inflammatory process in the seminal vesicle—whether near or at a distance from the ampulla.

**Shoulder Pains.**—In four patients and in himself, Liebermann studied a peculiar condition of pain in the shoulder on certain motions. In all but one case a traumatic factor was recognizable in the etiology, of the nature of a forcible pull in the shoulder joint. His etiologic theory is that the delicate joint capsule became torn and that on this there followed hyperemia, "inflammation" and swelling, with tension of the muscles. Studies on the cadaver explained the pain, by showing that, on rotation, both tuberosities moved across the place which, in the patients, was painful and that, furthermore, on this motion the sensitive capsule was caught and pressed between the bony projection and the muscles. In the acute stage, treatment should be rest and salicylic preparations; in the subacute stage, light massage, and in old cases vigorous massage and physical exercises.

**Two Unusual Cases of Sport Injury.**—Hillebrand calls attention to the dangers of boxing, on the basis of a case of nearly fatal intrathoracic hemorrhage from rupture of intercostal vessels. In another case, pains, radiating from the left thorax to the umbilicus, followed a high jump. Exploratory puncture in the left thorax drew blood. On the next day there was mucopurulent expectoration, which lasted for three weeks but was never bloody. The source of the hemorrhage was probably a lung rupture.

## Wiener klinische Wochenschrift, Vienna

**41:** 473-508 (April 5) 1928. Partial Index

*Rôle of Tuberculosis in Acute Articular Rheumatism. C. Reitter. —p. 473.
*Combating Cardiac Collapse. W. Wiechowski.—p. 475.
Tuberculin Problem. H. Koch.—p. 481.
Loss of Hair of Lateral Portion of Eyebrow. P. Neuda.—p. 482.
Histamine Determinations in Liver and Lung of Normal and Sensitized Animals. R. Rigler.—p. 484.
Diseases of Myocardium. M. Sternberg.—p. 485.
Problems of Pathologic Physiology in Light of Immunology. H. Sachs. —p. 489. C'cn.
Insulin Sensitiveness of Human Organism. K. Csépai.—p. 493.
Treatment of Furuncle of Lip. O. M. Chiari.—p. 494.
Treatment of Bronchiectasis. R. Strisower.—p. 495.

**Rôle of Tuberculosis in Acute Articular Rheumatism.**—In more than four fifths of the patients with acute articular rheumatism tested by Reitter, distinct allergy appeared in the skin after intracutaneous injection of 0.2 mg. of old tuberculin. In twenty patients with acute articular rheumatism, intracutaneous injection of diluted old tuberculin after retrogression of the acute symptoms was followed not only by a local reaction, but also by inflammatory phenomena in the connective tissue of certain joints and sometimes in serous membranes. Reitter offers the hypothesis that tonsillitis or any other bacterial infection leads to the symptom complex of articular rheumatism only if the tissues, particularly the connective tissues, are in a condition of hypersensitiveness. In Ranke's second stage, the so-called latency or generalization stage of tuberculosis, pronounced allergy exists. In certain cases this is accompanied by general hypersensitiveness, so that bacterial infection in this organism excites phenomena similar to those of anaphylaxis. The blood picture, on the other hand, differs entirely from that of anaphylaxis. A further way exists by which it is possible to understand a connection between acute articular rheumatism and tuberculosis: in an organism rendered generally hypersensitive by tuberculosis, the presence of infection of another sort might make possible generalizing outbursts with few tubercle bacilli. In this way synovitis, pleuritis, endocarditis, pericarditis and even fungus could be caused.

**Combating Cardiac Collapse.**—Caffeine and epinephrine were found by Wiechowski not only to increase the normal minute volume of the heart, but to bring the minute volume back at least to normal in all the varieties of experimental cardiac weakness in which he made the test. Experiments with a number of recommended cardiac analeptica convinced him that caffeine is, for the general practitioner, the only remedy active in all varieties of heart weakness. Intracardiac injection of caffeine deserves to be more frequently used as a restorative after cessation of the heart's action. He recommends treatment with caffeine before inhalation anesthesia; his experiments on the isolated frog's heart have shown that it is hardly possible for chloroform vapor to stop the beating of a heart previously treated with caffeine.

**41:** 509-544 (April 12) 1928. Partial Index

Sacral Pains in Static and Dynamic Decompensation and Their Treatment. M. Jungmann.—p. 509.
*Experiments in Etiology of Pernicious Anemia. K. Knorr.—p. 514.
Leukoplakia of Portio. H. Hinselmann.—p. 515.
*Rôle of Spine in Etiology of Gastric and Duodenal Ulcer. S. Plaschkes. —p. 516.
Extrasystoles and Extrasystolic Allorrhythmia. C. J. Rothberger. —p. 518.
Diathermy or Galvanization? J. Kowarschik.—p. 523.
Idiomuscular Contractions. A. K. J. Koumans.—p. 524.
New Methods in Infant Welfare. E. Stransky.—p. 525.

**Experiments in Etiology of Pernicious Anemia.**—Knorr makes a brief, preliminary report of the finding of a gram-positive diplococcus in the mouth and duodenum (or small intestine) of patients with pernicious anemia. This organism is agglutinated by the serum of patients with pernicious anemia diluted 1:320. In experimental animals these diplococci produce, in addition to hyperchronemia, the phenomena of toxic anemia. Pernicious anemia patients vaccinated by mouth with heterologous strains of this bacillus exhibited objective improvement with almost complete disappearance of subjective symptoms.

**Rôle of Spine in Etiology of Gastric and Duodenal Ulcer.**—Plaschkes has seen fifty cases of gastric or duodenal ulcer in persons with curvatures of the spine. He believes that lordosis or scoliosis can be responsible for ulcer by exaggerating the physiologic spino-pancreatico-hepatic constriction in the stomach (Aschoff), so that reflex spasms occur, which result now in delay, now in forcible expulsion of the chyle. He saw good results from fattening treatment, by which a thick layer of fat was interposed between the offending vertebrae (most often the last two dorsal or first two lumbar) and the stomach.

**41:** 545-580 (April 19) 1928. Partial Index

Heredity in Pathology. J. Wagner-Jauregg.—p. 545. C'td.
Hormonal Sterilization of Female Animal Organism. L. Haberlandt. —p. 553.
Historical Development of Biologic War Against Old Age. H. V. Klein. —p. 555.
Importance of Skin Diseases in Social Life. L. Arzt.—p. 559.
Best's Carmine Stain for Glycogen and Mucus. V. Patzelt.—p. 563.
*Treatment of Bilateral Pulmonary Tuberculosis. H. Maendl.—p. 564

**Treatment of Severe Bilateral Pulmonary Tuberculosis.**—Maendl reports a case of advanced tuberculosis of both lungs, in a man aged 24, in bad general condition, which was treated successfully with phrenicotomy on the left side and pneumothorax on the right. The operations were performed nine days apart.

## Zeitschrift f. d. ges. Neurologie u. Psychiatrie, Berlin

**112:** 639-817 (Feb. 26) 1928

*Effect of Sterilization, Result of Partial Tubal Resection, on Menstruation and Sex Life. B. Milt.—p. 639.
Physical Examinations of Schizophrenics and Manic Depressives and Examination of Teeth of Schizophrenics. H. Kaltenbach and A. Rohrer.—p. 661.
*Quantitative Estimation of Posterior Pituitary Lobe Secretion in Cerebrospinal Fluid of Epileptics. H. Altenburger and F. Stern.—p. 691.
Serobiologic Studies of Epileptics. H. Altenburger and L. Guttmann. —p. 711.
*Treatment and Prevention of Clonic and Tonic Muscle Spasms by Means of Counterirritation (Peripheral). H. Higier.—p. 730.
*Clinical Investigations of the "Supporting" Reaction. S. Parker and E. Stengel.—p. 747.
Spinal Cord Symptoms in Pelvic Disease. M. Lapinsky.—p. 755.
Fate of Ascending Lipiodol. M. Gortan and G. Saiz.—p. 772.
External Suppurating Spinal Peripachymeningitis. H. Bensheim. —p. 777.
Melanoderma: Traumatic Addisonism. J. Ratner.—p. 783.
Experiences with Adler's Individual Psychologic Treatment. H. Schmitz. —p. 793.
Psychology of Outlook on Life of the Middle-Aged. H. D. von Witzleben.—p. 807.
Use of Perdrau's Silver Reduction Method of Staining Connective Tissue Fixed in Alcohol and Imbedded in Celloidin. L. Davidoff.—p. 812.

**Effect of Sterilization, the Result of Partial Tubal Resection, on Menstruation and Sex Life.**—Milt asserts that a study of forty-nine cases has shown that partial tubal resection markedly lessens and eventually abolishes libido and the ability to participate in coitus, except in the case of those women for whom coitus had previously been painful or objectionable because of possible pregnancy. Milt points out the relationship of these disturbances to the likelihood of a happy marriage.

**Quantitative Estimation of the Secretion of the Posterior Lobe of the Pituitary in the Cerebrospinal Fluid of Epileptics.**—Altenburger and Stern examined the cerebrospinal fluid of eighty nonepileptics and of seventy-nine epileptics for posterior-pituitary-lobe secretion. It was present in seventy-one of the former and thirty-nine of the latter. They conclude, therefore, that absence of this secretion has an etiologic bearing on epilepsy—that the secretion is anticonvulsive.

**Treatment and Prevention of Clonic and Tonic Muscle Spasm by Means of Counterirritation (Peripheral).**—Higier is convinced that counterirritation checks muscle spasm and stops pain and hyperalgesia by preventing conduction of the

V 90
1928

provoking impulse from the viscus involved to the spinal pain centers; in other words, a spinal reflex is abolished. He cites many instances in which this result was obtained by using sinapisms, cantharides plasters, electricity, cold and warmth.

**Clinical Investigations of the "Supporting" Reaction.**—The positivé "supporting" reaction (Stützreaktion) is pointed out by Parker and Stengel as having been first described by Magnus. Pressure on the ball of the foot causes a fixation of the whole extremity in extension. They found this reaction to be of positive diagnostic value in cases of chorea and athetosis.

## Zeitschrift für Kinderheilkunde, Berlin

**45:** 365-444 (March 3) 1928

*Etiology of Measles. R. Degkwitz.—p. 365.
Case of So-Called Total Hemihypertrophy of Body. I. Graetz.—p. 381.
Insensible Perspiration in Infants: I. Physiology. De Rudder.—p. 404.
Increased Irritability of Vomiting Center as Cause of Pylorospastic Vomiting: Treatment by Hypnotics. A. Eckstein.—p. 423.
Neuritis Optica as Local Manifestation of Acute Anterior Poliomyelitis. W. Stoeltzner.—p. 439.
Glycogen Content of Liver. S. Rosenbaum.—p. 441.
Reply to Rosenbaum. E. Burghard and H. Paffrath.—p. 442.
*Case of Bacillus Proteus Meningitis. H. Herzig.—p. 443.

**Etiology of Measles.**—Degkwitz infected monkeys with cultured measles virus and found that the convalescent blood serum of these monkeys injected into human beings who had been exposed to measles gave protection against the disease, whereas the blood of normal monkeys afforded no protection.

**Case of Proteus Meningitis.**—In this case Herzig found *Bacillus proteus* in the cerebrospinal fluid obtained by puncture. Meningococci were absent. She suggests that the urethra might have been the portal of entry. A necropsy was not permitted.

## Zentralblatt für Chirurgie, Leipzig

**55:** 897-960 (April 14) 1928

Buried Foreign Bodies in Bones. F. König.—p. 897.
*Indications for Drainage of Biliary Tract in Acute Hemorrhagic Pancreatitis. H. Coenen.—p. 900.
Appendicitis in Measles. F. Rost.—p. 905.
Treatment of Phlegmon. M. Brandes.—p. 908.
After-Treatment of Fractures of the Vault. E. Seifert.—p. 910.
*Is Spontaneous Gangrene of Extremities a Primary Endarteritis Obliterans? E. Stahnke.—p. 914.
Treatment of Acute Inflammatory Processes of the Skin and Its Appendages with Carbon Dioxide Snow. F. Kroh.—p. 919.
Treatment of Peritonitis with Bacillus Coli Serum. J. Knopp.—p. 923.

**Indications for Drainage of Biliary Tract in Acute Hemorrhagic Pancreatitis.**—Drainage of the common bile duct is absolutely indicated when the papilla of Vater is occluded, but this is not a frequent occurrence. It is also indicated when cholecystitis or cholelithiasis is present, or when, on aspiration of the duct, turbid bile is obtained. Its value is problematic, Coenen feels, when the acute necrosis of the pancreas is due to other causes, such as activation of its secretion by a perforation of a gastric ulcer into the pancreas, or when it is caused by a hematogenous infection, by an embolism, or by trauma. In six cases of acute pancreatic necrosis, he limited himself to incision of the pancreas and drainage. Four of the patients were cured. He does not subscribe to drainage of the common duct as a routine procedure, but considers incision and drainage the essential features of the operation.

**Is Spontaneous Gangrene of Extremities a Primary Endarteritis Obliterans?**—In Stahnke's patient, a man, aged 23, both legs were amputated because of rapidly developing gangrene. Histologic examination showed normal blood vessels without the slightest evidence of arteriosclerosis. Some of these were occluded by thrombi which showed a beginning canalization. After the second amputation, the patient developed gas bacillus infection and died. At necropsy a large, soft, fresh thrombus, occupying about one half of the circumference of the thoracic aorta, was found. Fresh thrombi were discovered at the bifurcation of the aorta, and in the femoral arteries, as far as the adductor canal. In this case, the thrombi in the arteries of the extremities were primary and occlusion through their organization was a secondary event. Winiwarter's conception of a primary endarteritis obliterans as the cause of spontaneous gangrene of extremities is incorrect, at least in so far as this case is concerned.

## Zentralblatt für Gynäkologie, Leipzig

**52:** 729-792 (March 24) 1928

*Fetal Asphyxia During Labor. M. Henkel.—p. 730.
Formation of Artificial Vagina. R. T. von Jaschke.—p. 735.
Fallopian Tube in Roentgenogram. G. K. F. Schultze.—p. 736.
Cystic Hypertrophy of Cervix. F. Kovács.—p. 748.
Fatal Postpartum Hemorrhage from Rupture of Aneurysm of Splenic Artery. E. Mayer.—p. 754.
*Methods for Interruption of Pregnancy. G. K. Ziwatoff.—p. 757.
Regeneration of Uterine Mucosa After Artificial Abortion. J. Jakowleff.—p. 761.
*Hematoma and Abscess of Abdominal Wall After Extraperitonization of Fallopian Tube. F. Neugebauer.—p. 767.

**Fetal Asphyxia During Labor.**—An increase in rapidity in fetal heart action is not of great importance in diagnosing asphyxia; decrease in rapidity, on the other hand, denotes fairly constantly a deficient oxygen supply. The quality and rhythm of the fetal heart tones are important. Their strength should be determined at the beginning of labor as a criterion by which to judge future changes. The escape of meconium warns to particular care in controlling the heart tones, but is not a reliable sign of asphyxia. He recommends the use of Sachs' heart curves for judging the heart action. High forceps may increase the asphyxia and precipitate catastrophy.

**Methods for Interruption of Pregnancy.**—Ziwatoff discusses the results in 937 therapeutic abortions. No method, he points out, is without its disadvantages and dangers and individualized treatment is necessary. In general, in the first three months curettage is the best method. From the third to the fifth month and with rigid cervix in the first three months, Heinsius' anterior colpohysterotomy is preferred. After more than five and one-half months, metreurysis should be tried, though in only two thirds of the cases he studied was it successful alone. The mortality was 2.5 per cent. Tamponade and the bougie both gave very unsatisfactory results. The mortality with tamponade was 3.6 per cent, there was fever in 90 per cent of cases thus treated.

**Hematoma and Abscess of Abdominal Wall After Extraperitonization of Fallopian Tube.** — Neugebauer reports two cases illustrative of complications of this method of producing temporary sterilization. In the first case, the tube had been brought into the inguinal canal. Five years later, symptoms of incarcerated inguinal hernia appeared. The operation took place eight days after the appearance of the symptoms and six days after the last menstruation. A large hematoma was found. Since there had been no trauma and the tube itself was practically unchanged, Neugebauer believes it safe to assume tubal menstrual bleeding. In the second case, painful swelling occurred at the site of the operation scar on each side shortly after extraperitonization. These swellings subsided; the pain recurred occasionally. After three years swelling occurred on the left side, which did not subside. There were pain and fever. On operation an abscess was discovered. An infectious process had been carried into the abdominal wall from the tube.

**52:** 793-856 (March 31) 1928

Moving Pictures in Obstetrics and Gynecology. F. von Mikulicz.—p. 794.
Lipofibromyosarcoma of Uterus. A. Springer.—p. 806.
Endometrium in Fallopian Tube. L. Szamek.—p. 812.
Transuterine Injection into the Fetus. K. Schwarcz.—p. 817.
*Extra-Uterine Pregnancy: Treatment of Infected and Late Cases. E. Haeusermann.—p. 822.
Case of Placenta Accreta. L. Kraul.—p. 828.
Severe Colpitis from Coitus with Condom. A. Niedermeyer.—p. 833.
Diagnosis of Aplasia Cutis Congenita. F. Kovács.—p. 835.

**Extra-Uterine Pregnancy: Treatment of Infected and Late Cases.**—Haeusermann reports on 283 cases from 1921-1926. In fresh, uninfected cases the mortality was 0.7 per cent, in the late and the infected cases it was 24.5 per cent. A diagnostic Douglas puncture was practiced in nearly all cases. Operation should follow immediately; observing this rule, he saw only three postoperative Douglas abscesses. He found the blood sedimentation test unsatisfactory as a diagnostic measure, and the Lüttge-von Mertz alcohol reaction gave poor results. The ovary on the same side was regularly removed with the tube, if the other ovary was healthy. Salpingo-oophorectomy leaves better conditions for healing than salpingectomy. He recommends strongly reinfusion of the fresh blood from the abdominal cavity in cases with high

grade anemia. In fourteen of the twenty-four cases with infection, incision and drainage were practiced; in nine, laparotomy with removal of the diseased adnexa. In one, puncture alone was done. Of the patients treated with Douglas drainage, one died (pelveoperitonitis was present on admission); in two laparotomy had to be performed later. In the eleven others, Douglas drainage sufficed. Five of the patients on whom laparotomy was done died. In the latter and in two others the operation was urgent. The best results were obtained in two patients in whom the abdominal operation was performed after defervescence had set in. In infected cases, he advises waiting if possible for defervescence and then carrying out the radical operation.

## Klinischeskaya Meditsina, Moscow

**6:** 257-320 (March) 1928. Partial Index

Apoplectic Hemitonia, a Form of an Acute Lenticular Lesion. B. M. Bechterew.—p. 257.
*Syphilis Without a Chancre. B. U. Feldman.—p. 268.

**Syphilis Without a Chancre.**—Two forms of syphilis without a chancre, "syphilis d'emblée" of the French authors, are recognized. The first is a cryptogenic form, in which the first manifestation is enlargement of the regional lymph glands. The second is a hematogenous form, in which neither the chancre nor the adenitis can be discovered, but the disease manifests itself by the eruption. The author points to congenital syphilis as a striking example of a hematogenous infection without a primary lesion. It was shown experimentally that spirochetes can pass through intact skin or mucous membrane. The author adds that in such cases there is probably present a microscopic or histologic syphiloma, a histologic but not a clinical chancre. He cites two cases of hematogenous syphilitic infection resulting from blood transfusion. From the literature he collected eighty-eight cases of syphilis without a primary lesion.

## Acta Chirurgica Scandinavica, Stockholm

**63:** 207-309 (April 11) 1928

*Pulmonary Plasmocytoma. G. Diviš and H. Šikl.—p. 207.
Three Cases of Disease of Urinary Organs, Resulting from Congenital Anomaly. J. Hellström.—p. 221.
*Case of Fragility of Bones and Blue Sclerae. G. Levander.—p. 301.

**Successful Removal of an Unusual Pulmonary Tumor (Plasmocytoma).**—Diviš and Šikl describe a case of intrathoracic tumor, apparently originating in the anterior mediastinum and extending into the interlobar fissure of the right lung. The tumor was the size of a fist. Its base had involved the pericardium, while its surface was adherent to the visceral pleura. It was removed through a wide thoracotomy wound involving costotomy extending from the fourth to the seventh rib. The patient, a woman, aged 42, recovered completely. On microscopic examination, the tumor was classified as a plasmocytoma.

**Case of Fragility of Bones and Blue Sclerae.**—Levander describes a case of bone fragility associated with blue sclerotics. The patient had sustained eighteen fractures in the course of eleven years. He presented a typical dominant heredity.

## Acta Psychiatrica et Neurologica, Copenhagen

**3:** 1-91, 1928

*Case of Essential Thrombopenia with Hematomyelia. K. Evang.—p. 7. In English.
Case of Diabetes in Patient with Schizophrenia. A. Hofman-Bang.—p. 23.
Dissociation Between Voluntary and Emotional Innervation in Peripheral Facial Paralysis. G. H. Monrad-Krohn.—p. 35. In English.
Content of Cells and of Globulin Plus Albumin in Normal and Pathologic Spinal Fluids. A. V. Neel.—p. 39. In English.
Pathologic Observations in Case of Hemangioma of Brain. W. J. C. Verhaart.—p. 51.
*Two Cases of Spinal Cord Tumor: Fibroma and Giant Cell Tumor. D. Wiersma.—p. 63. In English.

**Case of Essential Thrombopenia with Hematomyelia.**—In a man, aged 30, with pronounced hemorrhagic diathesis (essential benign thrombopenia), a flaccid paralysis of both lower extremities and of the muscles of the abdomen, as well as loss of sensibility up to the second rib, set in suddenly without known cause. In the course of six and one-half months, the flaccid paraplegia developed into spastic paraplegia with flexion contractures, which passed into spastic paraplegia with extension contractures. The topical diagnosis of the patient's neurologic lesion was transverse lesion of the cord with upper limit at about the second dorsal. The most probable etiologic diagnosis was hematomyelia, although transverse myelitis must be considered. While the prognosis as to life is good, that as to function is undoubtedly bad. Fresh hemorrhages in the vicinity of the focus are liable to occur. Splenectomy, the radical treatment of the hemorrhagic diathesis, seems to be contraindicated by the patient's condition.

**Two Cases of Spinal Cord Tumor.**—One of Wiersma's cases was of intradural fibroma, the peculiarity of which consisted of the presence of cystic cavities, which must be ascribed to decay of tissue. Only one similar case appears in the literature. Nystagmus was among the symptoms. This disappeared after the operation, which resulted in a recovery except for some rigidity in the legs and a small hypesthetic zone. In the second case, the symptoms led first to a diagnosis of Pott's disease of the tenth thoracic vertebra. Roentgenologic examination after injection of iodized oil caused the diagnosis to be altered to tumor. Incomplete removal only was possible. The lesion appeared to be a giant cell tumor. Roentgen-ray treatment was given, but the patient grew worse and died. There was no necropsy. Wiersma discusses the comparative advantages of iodized oil and of air for injection in such cases.

## Hospitalstidende, Copenhagen

**71:** 151-176 (Feb. 16) 1928

*Investigations on Optic Activity of the Spinal Fluid. C. N. J. Gram, O. J. Nielsen and E. Rud.—p. 151.

**Investigations on Optic Activity of Spinal Fluid.**—Gram et al. studied the optic activity and reduction ability in twenty-one spinal fluids from patients with normal carbohydrate metabolism (potassium ferrocyanide method). Shortly after lumbar puncture, there was a shifting to the right, the average value corresponding to 0.026 per cent of dextrose, in all cases definitely lower than the reduction value. Administration of dextrose by the mouth before lumbar puncture did not seem to raise the sugar content of the spinal fluid. In three out of eleven tests on spinal fluids from one to two days old, the rotation values increased spontaneously, approximately up to the reduction values. The irregularity of the increase testifies against the presence of a particular dextrose form with low specific shifting angle and power of multirotation. Immediate increase of the rotation ability toward the reduction ability followed on precipitation of albumin by lead acetate. Two experiments with separation of the sugar in the spinal fluid by dialysis and of the albumin by precipitation indicated that these substances act on the optic activity of the spinal fluid independently of each other; no condensation product of sugar and albumin was found. Assuming that no other optically active substances are precipitated with the albumin, spontaneous shifting to the right in spinal fluids is believed due to changes in the proteins.

## Ugeskrift for Læger, Copenhagen

**90:** 283-304 (March 29) 1928

*Cancer of Body of Uterus. S. Harsting.—p. 283.
*Cosmetic Operations on Nose and Paraffin Injections. H. N. R. Blegvad.—p. 286.

**Cancer of Body of Uterus.**—Harsting considers cancer of the body of the uterus to be comparatively benign. In sixty-two of his sixty-four cases the first and only early symptom was metrorrhagia. In 64 per cent of the cases the symptoms appeared some years after the menopause, in 36 per cent, before or simultaneously with the menopause. Treatment was surgical; the method of choice is vaginal hysterectomy with ligatures. Ninety-five per cent of his cases were operable. The primary mortality was 8 per cent; recovery followed in 56 per cent.

**Cosmetic Operations on the Nose and Paraffin Injections.**—Blegvad warns against cosmetic treatment by paraffin injections, because of the danger of later complications, even with the use of hard paraffin and most careful technic. He asserts that every deformity remediable by paraffin injection can be corrected by other and safer methods.

V 90
1928